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Editorials

THE INCREASING IMPORTANCE OF HOSPITALS. HOSPITALS SHOULD BE CONTROLLED BY MEDICAL MEN

Traditional and fallacious human tendency to attempt to manipulate the whole by the part finds fresh expression and additional cause for deprecation in the attitude of the general public towards the comparative importance of the quantities involved in the affiliation between the medical profession and the modern hospital system. It is, too, a shining target for the destructive arrows of state medicine.

Interdependence between the profession and these admirable institutions, the great hospitals, is as closely knit as that between world trade and international finance. Commerce can be carried on without these standards, but with impaired efficiency and ease. Development of modern hospitals has made of these institutions an integral unit in the science of health and medicine. Yet after all they are only a unit and not the whole. Interdependent though they be, it is the medical profession that creates, upholds and builds the hospital, and not the hospital the medical profession. The degree and quality of this relationship must not be misconstrued. Once again, it must be remembered "the tail cannot wag the dog."

It must be admitted that to the impenetrable eye, both among the educated and the uneducated, the fine, modern hospital possesses qualities far more spectacular than does the grave and customarily over worked and over burdened man of science. The modern hospital in its fittings appeals to a certain sybaritic trait in the sick as well as to his peace of mind. There is a feeling that "all's well," or at least, as well as it can be —in these hygean palaces. Which is quite as it should be. Immaculately garbed nurses, internes and maintainance corps and buildings; perfect equipment and ultra efficiency make of

the modern hospital an elementally essential tool in the hands of the physician. Both as a pedagogic entity in the teaching of medicine and as an almost sine qua non in its practice, the hospital stands today as a tribute both to the physician and his patient.

After all, however, the hospital is merely a tool and a tribute and not inherently the medical profession itself. Perhaps it is not in error to say that the mother profession is the soul and the brains of the healing arts and sciences, and the great and wonderful hospitals, these splendid machines, a wonderful and perfect body in which to house them.

A man ruled by his body alone does not contribute to the mortal state the best of the humanities. The analogy is obvious even if not exactly co-incident.

Since hospitals are an aid to the physician and a mere auxiliary to the practice of medicine, which after all, is the raison d'etre for the foundation of the hospitals, rather than in the converse reading it is essential that the doctors shall control the hospitals rather than have these institutions, marvels though these be, hamper the physician either through federal, state or lay directorate control or subsidization. All three of these agencies are entering into increasing competition with professional and private hospitals. Unless such institutions are controlled by the physicians themselves there are reefs ahead. Admitting that the economic situation is such that the upkeep of a hospital, thanks to the prices paid for general labor, both skilled and unskilled, make hospital efficiency from a maintenance standpoint as expensive as that of a high-priced hotel, even this is no excuse. The economics of the institution while in the hands of economic experts should be ever subordinate to the authority of the medical profession.

Otherwise chaos will result. Science and medical efficiency must needs fall by the wayside when forced to play handmaid to the cook and the cash box. Science for Science sake, and the world well lost, is the sesame for progress in the healing art.

Under date of March 28, 1931, the Journal A. M. A. publishes an editorial for which it deserves the congratulations of every worth while member of the profession. Under the title "The Increasing Importance of Hospitals" and based on the tenth annual compilation of statistics on hospital service in the U. S., this editorial emphasizes among other saliencies these facts:

HOSPITALS AND MEDICAL EDUCATION

"There are in the United States 76 acceptable medical schools, but there are 316 teaching hospitals with a total bed capacity of 135,548, affiliated with the 76 medical schools for teaching purposes and make the high quality of the clinical service in these schools possible.

"After the completion of four years of study in the medical schools, 664 approved hospitals, with a total bed capacity of 201,974, wait to receive the army of medical students, with an offer of 5,584 internships for their practical training in the care of the sick. And to those who, now trained in general medicine, desire to pursue some special branch of medical study, another group of 349 hospitals, with a total bed capacity of 218,495, offer 2,069 approved residencies in the various specialties.

"Adequate statistics are not available regarding the large number of hospitals offering postgraduate courses —courses designed to keep efficient the well trained army of practitioners whose contacts with medical schools are now matters more of past than of current history. The clinics held singly rather than in courses constitute another unknown but important factor in this phase of hospital service.

INCREASING USE OF HOSPITALS BY PHYSICIANS

"The practice of medicine also is being transferred to hospitals in a continuously increasing degree. In 1909 there were in the United States 4,359 reasonably acceptable hospitals; in 1930 there were 6,719, a numerical increase of 2,360, or 54.1 per cent. But the bed capacity of these hospitals rose during the same period from 421,065 to 955,869, a capacity increase of 534,804, or 127 per cent.

"Approximately two-thirds of the active physicians of the United States are now connected with hospitals. In 1929 there were 152,503 licensed physicians, about 10,000 of whom were not in practice. Of the 142,500 who were in practice, 98,491 were connected with hospitals as staff members, superintendents, residents and interns. The physicians of ten or more years ago were not so connected to any such extent. Indeed, the increased use of hospitals has proceeded with and has been largely due to the increase in connection of physicians with the hospitals. If the present trend continues, the number of active physicians not connected with hospitals will be infinitesimal.

"The greatest number of those not yet participating in hospital practice are among the general practitioners. Hospital connection has become a practical necessity to the specialist and has increased with the growth

of specialization. In 1929 the number of practitioners in the various specialties were:

Internists	3,378	Orthopedists	810
Surgeons	12,939	Ophthalmologists	1,343
Neuropsychiatrists	1,973	Otorhinolaryngologists	6,805
Radiologists	1,653	Specialists in tuberculosis	984
Dermatologists	896	Urologists	2,249
Pathologists	672	Other specialists	1,972
Pediatricians	3,505		
Obstetricians and gynecologists	6,108		

"These practitioners make the hospitals what they are and in turn depend on them for their economic and professional lives. Every specialty therefore has a claim on these hospitals—a logical and undeniable right to a voice in the determination of hospital plans and procedures. The interests of no one specialty are paramount; the solution of hospital problems is the common task of all.

FEDERAL AND STATE HOSPITALS

"Federal and state governments are entering into competition with private agencies in the hospital field to a constantly increasing extent. In 1909 there were 232 state hospitals in the United States; in 1930 there were 581, a numerical increase of 150.4 per cent. In 1909 the bed capacity of state hospitals was 189,049; in 1930 it was 405,309, a capacity increase of 114.3 per cent. In 1909 there were 71 federal hospitals in the continental United States; in 1930 there were 288, a numerical increase of 305.6 per cent. In 1909 the bed capacity of federal hospitals was 8,827; in 1930 it was 63,581, a capacity increase of 620.3 per cent.

"Such strides in the building and enlarging of hospitals by federal and state governments may be interpreted in either of two ways: one may see in it a belated recognition of civic duty in the matter of chronic cases where family financial support fails; *or one may view it as a preparatory step in a policy of unlimited expansion whose ultimate goal is state medicine.*

"From 1923 to 1930 the number of laboratories in hospitals increased from 3,035 to 4,249. During the same time the number of x-ray departments increased from 2,841 to 4,523. The departments of physical therapy in hospitals numbered 2,091 in 1927 and 2,236 in 1930. And along with the increase in the number of these adjuncts to diagnosis and treatment in hospitals has come increased demand that these departments be under the supervision of medical practitioners who are specially qualified.

GROWTH OF OUTPATIENT SERVICE

"The outpatient service of hospitals has grown steadily in recent years. Indications are that this growth has been influenced more by the tendency to congregate in cities than by the increasing density of population in general. In 1921, 678 hospitals reported that 3,000,163 outpatients made 9,552,123 visit to the outpatient department. In 1929, 1,027 hospitals reported that 6,644,983 outpatients made 19,056,394 visits.

INTERDEPENDENCE OF HOSPITALS AND PHYSICIANS

"The greater the development of such institutions as have been described, the more extensive their use by the people, the more active must become the interest of the physician and in their direction and control. It seems so simple to leave the economics, the construction, the administration of hospitals to lay boards and superintendents that far too many physicians are content simply to have the hospital as a work place ready for them and their patients. Thus the attitude has grown among many philanthropists and hospital workers that the physician is the recipient of these facilities from the public and must therefor be under their direction. Nothing could be more fallacious. The doctors make the hospital. Without them it necessarily falls. Its merits are equivalent to their merits and cannot surpass them. This fact should be realized by lay directors, who should take their medical staffs into consultation on every matter affecting the welfare of the institution and be guided by them in every scientific problem."

In many instances control of hospital activities goes hand in hand with control of medicine. For already many institutions dictate how the physician should conduct himself with regard to his practice, his hospital affiliations and his public. In this respect probably the greatest injury is inflicted through the inflexibility of any system designed permanently to meet the needs of a few of the profession in certain localities. But needs vary as do localities. Policy, management and control of all hospitals should be in the hands of local physicians. Let these men rule the hospital, rather than tolerate hospitals ruling the physicians, is an axiom that brooks no evasions.

Activities of all hospitals should be directed towards their scientific inherencies. Under no conditions should a lay board of control ballyhoo the public in an attempt to meet hospital needs. Such matters should rest in the hands of a general board of physicians. Indiscriminate philanthropy with self-aggrandizement as a background, has admitted persons on hospital boards who have absolutely no right to such membership. The practice of the profession is unnecessarily clouded by philanthropies that strain the quality of mercy and throw blinding dust into the eyes of scientific progress.

Equally reprehensible and serving practically as a Siamese twin with this handicapping philanthropy is another phase of serious and dangerous import. That is lay influence in the control

and management of hospitals. Now hospitals are the scientific workshop of the medical profession, yet lay trustees can outline the policies governing the hospitals. Such rules require visiting physicians to submit to regulations made by lay superintendents or head nurses. These rules and regulations may be contrary, very often, to what is considered by physicians as best suited to the welfare of patients whom they attend in these institutions.

Hospitals in communities are serviceable only through their staffs of attending physicians and surgeons. These staffs send in the patients. Without patients hospitals would have no reason for existence. Lay trustees recognize staffs by granting these men the dubiously high honor of selecting from among themselves executive bodies which have the privilege of carrying medical difficulties to the trustees, lull these staffs erroneously into a feeling that often all staff doctors are integral factors in the management of hospital affairs.

Lay control of hospitals has introduced a new feature into the field of medical practice and a sad one. Some hospitals are practicing medicine as a business. These hospitals are hiring physicians, charging patients for professional advice and for treatments by these physicians, collecting the fees and entering such moneys on their books as revenue received. By this practice hospitals are actually competing with their staff members. Obviously there are possibilities dangerous to both physicians and hospitals incident to this lay advance into the field of medical practice.

Which shall it be, hospitals handled by medical men who are skilled in public health, or hospitals run by bankers, skilled in public wealth?

THE LAY PUBLIC BOTH PRIVATELY AND COLLECTIVELY IS TAKING ADVANTAGE OF MEDICINE'S CONTRIBUTIONS

The lay public, both privately and collectively and from both selfish and altruistic viewpoints, is taking advantage of medicine's contributions. Private citizens and politicians are insisting that medicine be socialized. Life, health, accident and industrial insurance companies are shaping many of their policies on medicine's discoveries. The menace in this respect is manifest in the employment of large numbers of medical men in these industries and in health movements who are being subordinated gradually but surely to a position that is merely that of technicians.

Socialization of medicine means the subjection by legislative control and political manipulation, of the medical profession in a system of state medicine which includes any movement which would compel physicians to practice on terms dictated by lay people. In medical education there is also a dangerous trend of the times. Great universities and large foundations, through lay board control, regulate the placement of medical schools, the adoption of curriculums, and dictate the selection and compensation of professors.

A menace in its embryonal stage is the organization of lay institutions which practice medicine. Doctors in these organizations occupy a similar position to employes of life, health, accident and industrial insurance companies, being mere employes who carry out the policies of lay directors.

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WHY MORE DISPENSARIES IN CHICAGO

The Medical Profession Should Take the Lead in Its Own Household Affairs

Not so long since the Northwest Branch of the Chicago Medical Society successfully opposed the establishment of another "free" dispensary in an outlying hospital.

There are only two legitimate reasons for the "free" dispensary.

One concerns the establishment of a purely charitable organization for the ambulatory treatment of indigent patients. Such a dispensary may be wholly independent, may be attached to a hospital or may be associated with social centers. In America the expenses are ostensibly covered by private charity—actually, the physicians contribute 80 per cent. In Europe such free dispensaries may be State supported—the physicians at least receive remuneration.

The other concerns the dispensary ostensibly established to develop material for clinical teaching. While limited to indigent patients, the sole and only legitimate object is the teaching of medicine—not charity. Such dispensaries are not primarily for the benefit of the patient. They are perfectly proper instruments of medical instruction. Not infrequently there appears to be a tendency to confuse the two distinct fields.

The dispensary of the medical school that is used for teaching must grow with the needs of its teaching requirements. This means that the clinical material at its disposal should be used to its fullest extent—that the student himself shall do the work. There should be no sentimental confusion in this matter.

Granted these premises, the medical profession should carefully control the development of dispensaries. The pressing and necessary teaching needs of medical schools should be met as far as possible through the use of public charity hospitals.

While the present interest of the Chicago Medical profession in this question is without doubt the product of economic pressure, the larger problem involved in the proper guidance of the growth of Chicago's great medical possibilities deserve equal study and consideration. The two are inseparably connected.

The tax payer is beginning to be a bit weary of unnecessarily wasteful official maladministration and lack of co-ordination—the people are beginning to demand some "system" in public affairs as well as in the conduct of chain stores. It might be well for the medical profession to take the lead at least in its own household affairs.

DOCTOR MAYO CRITICISES HOSPITALS

Dr. W. J. Mayo, surgeon and chief of the staff at the Mayo Clinic of Rochester, Minn., recently adversely criticised hospitals in addressing the 12th annual hospital standardization conference which prefaces the clinical congress of American College of Surgeons.

Dr. Mayo charged the hospitals with too much salesmanship and too little humanity.

Supersalesmanship in management of some hospitals often resulted, he said, in the patient being placed in surroundings which, however they might appeal to his esthetic sense, were above his means.

"My own experience has been that patients, in a well-planned, even moderate degree of privacy, on the whole will make a quicker recovery than in a private room with two attentive nurses who unobtrusively in caring for the physical needs and increasing the happiness of the patient, may suggest a mental state in which the diseased condition is exaggerated sympathetically," he said.

Dr. Mayo defended the trained nurse, declaring that at present her fine training was wasted in scrubbing floors, making beds, giving patients baths and other tasks a hospital maid could be trained to do in six months.

THE DIFFERENCE BETWEEN MEMBERSHIP AND FELLOWSHIP IN THE A. M. A.

From time to time we find that many of our members are confused as to the difference between Membership and Fellowship in the American Medical Association.

The following is therefore published for the information of our members:

ONCE MORE: MEMBERSHIP-FELLOWSHIP

Every member in good standing in any constituent state medical association, whose name is reported to the secretary of the American Medical Association for enrollment, is a member of the American Medical Association. No *member* of the American Medical Association is called on, as such, to pay any dues or to contribute financially to the Association.

Every member of the American Medical Association in good standing is eligible for *Fellowship*. To qualify as a Fellow, a member in good standing has only to make formal application for that relation and to subscribe for the Journal. Fellowship dues and subscription to the Journal are both included in the one annual payment of $5, which is the cost of the Journal to subscribers who are not Fellows.

None but Fellows are eligible for election as officers; none but Fellows can serve as members of the House of Delegates; none but Fellows can register at the annual sessions of the Association or participate in the work of its scientific sections.

On June 1, 1930, there were 99,181 names on the membership roll, 65,419 of which were duly listed on the Fellowship roster.

Members of state medical associations pay dues to those bodies, but they pay nothing to the American Medical Association. *Fellows* pay dues and subscriptions to the Journal in the sum of $7 a year, which has nothing to do with county or state dues.

UNUSUAL OPPORTUNITY FOR POST-GRADUATE STUDY IN FRANCE DURING JUNE AND JULY, 1931

POST-GRADUATE COURSES, DELIVERED IN THE ENGLISH LANGUAGE IN THE LEADING HOSPITALS OF PARIS (FRANCE), DURING THE SUMMER OF 1931

The Faculty of Medicine of Paris (the Medical School of the University) announces that during June and July, 1931, a comprehensive series of post-graduate courses will be presented. The enterprise is conducted under the auspices of the Association for the Development of Medical Relations (the "A. D. R. M.") a commission sponsored by the French Government.

The work will be presented in the English language. Clinics, lectures and demonstrations will be conducted in the great hospitals of Paris, on a wide variety of topics, by the most eminent French clinicians. A nominal fee will be charged for each course. Upon the completion of each course, the student who qualifies will receive a certificate covering the work, signed by the professor in charge.

Detailed information may be secured by addressing direct, Professeur E. Hartmann, President, "A. D. R. M.," Faculty of Medicine of Paris, 12 Rue de L'Ecole de Medicine, Paris (6e), or in the United States, Doctor Frank Smithies, 920 North Michigan Avenue, Chicago, Illinois.

THE 1931 ANNUAL MEETING

The Annual Meeting is the Member's own meeting, and as the time for the 1931 meeting grows near, the members of the Illinois State Medical Society should be planning to attend the East St. Louis Meeting. Special attention should be called to the unusually attractive program arranged for Tuesday afternoon, May 5, 1931. Six Nationally known speakers will appear before a Joint session of the Sections on Medicine, Surgery, Public Health and Hygiene, and Radiology. Each speaker will refrain from using technical terms, and make his talk of particular interest to all physicians, regardless of their professional inclinations.

This interesting "guest session" will begin at 1:00 o'clock, Tuesday afternoon, and continue through the afternoon. A wide range of subjects have been selected so that they will appeal to all physicians.

The Secretaries' Conference will be held at 10:00 A. M., Tuesday, and it is hoped that all of the Secretaries will be present at this most important meeting.

The Oration in Medicine will be delivered by W. W. Duke of Kansas City, on his favorite subject of "Allergy." Dr. Evarts Graham, Professor of Surgery, Washington University School of Medicine, St. Louis, will deliver the Oration in Surgery. At the General Meeting on Wednesday afternoon, Col. Louis H. Bauer, former Medical Director, Bureau of Aeronautics, De-

partment of Commerce, will talk on "Aviation Medicine." This will be of interest to all physicians present at the meeting, and particularly interesting to the Examiners of the Bureau of Aeronautics. The General opening meeting on Tuesday evening will begin at 7:30, and the principal speaker will be Dr. Richard Sutton of Kansas City, one of the world's greatest big game hunters. Dr. Sutton will give an illustrated talk on "The Long Trek," describing and picturing big game hunts in Africa. This meeting is open to the public, and should be well attended. The General Meetings and four of the Section Meetings will be held in the large AINAD SHRINE TEMPLE. The President's Dinner will be held in the Knights of Columbus Building, and the program for the dinner has been carefully arranged, and will appeal to all present. This interesting function should be well attended, in honor to our President, Dr. William D. Chapman, and to our Past-Presidents, who will be guests of honors. There will be no speeches, but good entertainment.

The exhibits, both commercial and scientific, will be housed in the Exhibition Hall of the Shrine Temple. These will be of great interest to all physicians at the meeting. The Scientific Exhibits this year will be more extensive and more interesting that those shown at previous meetings. Much valuable and highly interesting data will be presented and there will be many attendants who are thoroughly conversant with the subject displayed, to increase the interest.

The 1931 Annual Meeting has been well planned. The East St. Louis Committee has done everything possible to make the meeting a successful one, and each of the Sections has arranged a highly interesting program.

A short synopsis of the papers to be presented is included in the program this year, and will be of interest to all who read it, as they will know the nature of each presentation.

The Exhibit List printed in this JOURNAL is not complete, owing to the fact that the official program is printed earlier this year than usual, but a complete list will be available later. The Meetings of the House of Delegates should be attended by the Delegates selected from each component Society. Every Society is entitled to one or more delegates, according to the membership of the Society. Each Society, therefore, is entitled to a voice in the Transactions of the Hous of Delegates. Be sure that your delegates attend the meeting, and then after the meeting have them report back to your Society, so that every member of the Illinois State Medical Society will know what the House of Delegates does for the improvement of Medical Conditions of our State. Hotel reservations can be made in East St. Louis by addressing the Chairman of the Committee, Dr. J. J. Donahue, East St. Louis. Those desiring to play golf may do so by arranging with the golf committee on reaching East St. Louis.

Application has been made to the Western Passenger Association for a reduced fare for those traveling by train, on the certificate plan. When you purchase a railroad ticket to the meeting, buy a one way ticket, and ask for a convention certificate. The certificate must be deposited, after it is signed, at the registration desk. When the required number of certificates have been received, they will be validated, and will entitle the holder to purchase his return ticket at one-half of the regular fare. All hard roads running South will lead to East St. Louis, and special arrangements have been made for parking spaces for all visitors at the meeting.

Mark the dates on your calendar, May 5, 6 and 7, 1931. Plan to attend the meeting, and you will be well repaid.

TO OUR EXHIBITORS

The Illinois State Medical Society has endeavored to arrange everything in connection with the East St. Louis Meeting to suit your convenience, and to the best advantage. The McMahon Transfer Company, East St. Louis, has been designated as the official concern to receive your exhibit materials, to keep them until Monday, May 4, and place them on the floor of the Exhibition Hall that morning. After the meeting, they will take care of the billing and returning of the exhibits according to your instructions.

The Exhibition Hall will open at 8:00 A. M. and close at 6:00 P. M. each day of the meeting. All exhibits should be fully arranged by Monday evening, May 4. Uniform booths will be ready for your exhibits. Tables and chairs are available. If you desire special wiring, or carpenter work, same can be easily obtained in

the building. Special furniture can be rented at a nominal rate, if same is desired.

Every precaution will be taken to protect your exhibit, after the hall is closed each evening. Night watchmen will be present during the night and the room will be locked.

Opportunity will be given all who attend the meeting to visit the exhibits. Many highly interesting scientific exhibits will be shown to attract more visitors to the hall.

The Illinois State Medical Society is always careful in the selection of their exhibitors, and is anxious to aid in every way possible to make your exhibit a successful one.

Representatives of the Society and members of the committee on exhibits will be present during the meeting to give every aid within their power.

You will all be interested in hearing the illustrated lecture given by Dr. Sutton at the opening meeting on Tuesday evening on "The Long Trek." Dr. Sutton is one of America's greatest big game hunters, and his collection of slides which will be shown is one of the best in existence. You will also be invited to attend the interesting meeting sponsored by the St. Clair Medical Society after the opening meeting, and you will enjoy the entertainment immensely.

TO THE MEMBERS OF THE ILLINOIS MEDICAL SOCIETY

As President of the St. Clair County Medical Society, it is a pleasure to extend an official and most cordial invitation to attend the Eighty-first Annual Meeting here in East St. Louis, Illinois, on May 5, 6 and 7.

Everything that a perfect host could do will be well exemplified here during this meeting, and a real determined effort should be made to attend it.

It is the first time within twenty-five years that the Southern part of the State has been honored by this convention, and we feel the responsibility of making it bigger and better than ever.

PLACE—East St. Louis, Illinois.

TIME—May.

DATE—5, 6 and 7.

Sincerely,

Jos. G. Beykirch, President,
St. Clair County Medical Society.

WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

Program for State Meeting
East St. Louis, Illinois, May 5-7

Headquarters—Broadview Hotel.

Registration Booth at Doctors' Headquarters, Ainad Temple, 609 St. Louis Avenue.

Tuesday, May 5

10:00 A. M.—Board Meeting.

10:30 A. M.—Meeting County Presidents with Pres. Elect, Mrs. T. O. Freeman.

1:30 to 4:00 P. M.—Trip to Forest Park, St. Louis, visiting Lindbergh's Trophies and Zoo.

7:00 P. M.—Dinner for Board and County Presidents.

8:00 P. M.—Joint Meeting, Ainad Temple. Official Reception followed by a lecture on "Travels in Africa."

Wednesday, May 6

9:00 A. M.—Open meeting for all members and guests.

1:00 P. M.—Luncheon St. Clair County Club, for all members and guests.

Speakers: Mrs. A. B. McGlothlan, St. Joseph, Mo., President-Elect, Woman's Auxiliary to the American Medical Association.

Mrs. G. Henry Mundt.

Installation of new President, Mrs. T. O. Freeman, followed by bridge or golf.

6:30 P. M.—President's dinner with doctors, Knights of Columbus, Washington Pl. and State St.

Thursday, May 7

9:00 A. M.—New Board Meeting with President, Mrs. T. O. Freeman.

SUGGESTIONS OF A CONSTRUCTIVE PROGRAM FOR THE WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

I—EDUCATIONAL:

1. Exercise franchise and influence in programs of women's clubs.
   (a) All clubs should have capable physicians' wives on health committees.
   (b) Secure speakers from Educational Committee, Illinois State Medical Society, 185 North Wabash Avenue, to deliver health addresses.
   (c) Prevent food and health propagandists of every kind from appearing before clubs.

Keep off quacks and faddists with their misleading propaganda.

(d) *Study* preventive medicine — vaccination, diphtheria prevention, typhoid inoculation, the value of animal experimentation in order to combat self-opinionated advice from club sisters.

(e) Subscribe for Hygeia and have same in club reading rooms and in public libraries.

2. Cooperate with organizations:
   (a) Parent Teacher Associations—recommend pre-school examinations be given in physicians' offices.
   (b) Nurses' associations.
   (c) Workingmen's associations.
3. Guide the press:
   (a) Secure publication of health articles (Educational Committee have hundreds of interesting articles on file.)
   (b) Try to suppress untruths and fallacies concerning preventive medicine as published in women's magazines, popular monthly magazines and especially in church organs.
4. Urge periodic health examinations:
   (a) Set the example yourself.
   (b) Urge your husband to take more interest in physical examinations.

II—CIVIC:

1. Keep up with community interests: (That is, be informed.)
   (a) Sanitation.
   (b) Water supply.
   (c) Food control. (Dirt, flies, adulteration.)
   (d) Milk supplies. (Constant inspection, pasteurization, certified milk.)
   (e) Clean alleys—garbage disposal.
   (f) Noise and smoke abatement.
   (g) School lunches. Supervision of lunch rooms and confectionery rooms near schools.
   (h) Vaccination—diphtheria prevention—typhoid inoculation; quarantine regulations.

III—POLITICAL:

1. Study proposed medical and health legislation so that you can talk intelligently concerning it.
2. Be prepared to respond to SOS from the Chairman of the Legislative Committee of the Illinois State Medical Society.
3. Be sure that you and your husband's votes are for the things for which the medical profession stands.
4. Be informed as to the position taken by legislators concerning medical legislation.
5. Do not engage in unbecoming political controversies or be led into such by political parties or candidates. Make your influence felt quietly and by force of numbers. Every candidate for office fears the effect of unity among women.

IV—ECONOMIC:

1. Every physician's wife should be interested in the legitimate business success of her husband. To that end she should use her influence to prevent:
   (a) The unfair competition of badly managed welfare clinics which in the final analysis are detrimental to public and profession alike.
   (b) The impositions practiced by individuals and under the guise of charity secure valuable medical and surgical services for which at least modest fees should be paid.
   (c) The increasing tendency among well-intentioned welfare workers to demand and secure unjustified free professional services for a large class of people who while not able to pay regular fees are not objects of charity but can pay something and thus aid in limiting pauperism and dependency with its ultimate increase of general taxation. Oppose free clinics, open to all, that pauperize the community.
2. On behalf of the community the physician's wife may be able to use her influence to bring about the realization that the medical care of the sick poor is a community obligation and not one to be shifted to a few generous and philanthropically minded physicians.
3. Keep posted on legislative action that affects physicians as in the case of taxation:
   (a) Unfair provisions of income tax.
   (b) Unfair duties on instruments, drugs, books, etc.
   (c) Paternal legislation like Sheppard-Towner bill.
4. The better the physician the better the service to public and correspondingly better income from service rendered, hence husbands should be encouraged to read latest medical journals, attend post-graduate courses, and, above everything else, attend meetings of county medical society. Wives can do much to encourage this feature.

V—SOCIAL:

1. Least important but necessary in the general scheme:
   (a) Get to know physicians' families—create good fellowship. Some of us are more likable than many think we are.
   (b) Have meetings occasionally to discuss the functioning of auxiliary and plans for future. Invite physicians to speak. Serve light refreshments.
   (c) Don't alienate women desirable as members by unseemly scramble for office or preferences of any kind. Select your representatives with an eye to ability and fitness for the position.
   (d) Don't neglect the social features which promote acquaintance and good feeling among your members, but make that a minor feature in your constructive work.
   (e) Encourage the admiration, sympathy and help

and the appreciation of members of the medical profession and be guided by their advice.

ORGANIZED COUNTIES, WOMEN'S AUXILIARY, ILLINOIS STATE MEDICAL SOCIETY

Cook

President—Mrs. G. L. Kaufman, 2440 Lake View avenue, Chicago.
Corresponding Secretary—Mrs. N. M. Percy, 2130 Lincoln Park West, Chicago.

Vermilion

President—Mrs. S. M. Hubbard, Ridgefarm.
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President—Mrs. E. R. Steen, 308 Sterling avenue, Joliet.
Secretary—Mrs. Matthew Bloomfield, 817 Mack street, Joliet.

ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

The Sixtieth Annual Meeting of the American Public Health Association will be held in Montreal, Quebec, September 14-17. The Windsor Hotel will be headquarters.

For particulars write

C. C. YOUNG, D. P. H., Chairman,
c/o American Public Health Association,
450 Seventh Ave., New York City.

THE STATE MEDICAL JOURNALS HAVE COMBINED IN PROMOTING A CO-OPERATIVE CLINIC TOUR OF EUROPE

The State Medical Journals are promoting a co-operative clinic tour of Europe. The co-operative feature of the enterprise makes it possible to offer their readers a most interesting European clinical tour at a price that is unusually attractive.

It differs from the traditional clinic tour in two very conspicuous ways: the individual clinic service by which a man is enabled to see in each city the things that most immediately concern him, and the new range of choice in the matter of transportation. We have joined with the other State Journals in the organization of this party because we believe that the features just mentioned will appeal very strongly to doctors of independent habit of mind and also because it enables us to offer to the members a tour at practically wholesale prices.

All arrangements for the tour have been made with the "Travel Guild," a tourist agency of large experience and unquestioned integrity. The tour begins at the port of embarkation, Montreal, Canada, June 12, and closes at the same point July 20. The price for the tour complete and without exception, is $895.00. It would be difficult to arrange a more attractive itinerary combining both work and play, than this one, and most certainly not for the low cost mentioned. Accommodations throughout will be first class, including cabin service crossing the ocean, railroad transportation in Europe, and class A hotels wherever stops are made.

Of especial interests in connection with this tour is the offer of transportation by de Luxe private automobiles, or by air. There will be, of course, an additional charge for transportation of this character. There is a booklet which tells all about it, and which may be had by applying to the JOURNAL office or the headquarters of the Travel Guild.

The tour will begin immediately following the annual session of the American Medical Association at Philadelphia. Those who desire to take the trip can leave Philadelphia late in the afternoon of June 11, and arrive in Montreal in time to catch the boat early the next morning, June 12.

Those who have in mind a vacation abroad this summer will find the co-operative tour worth investigating. The Travel Guild has prepared a beautiful booklet describing the tour which will be sent to anyone upon request. Clip the coupon to be found in the four page insert in advertising section of this issue of the JOURNAL and send it to headquarters and a booklet describing the

tour will be sent you promptly. Write to the office of the JOURNAL or the Travel Guild Company, 180 N. Wabash Avenue, Chicago, Illinois.

FOREIGN COOPERATION IN CONNECTION WITH THE CLINIC TOUR

We have a truly wonderful list of men in Europe who are making all local arrangements in each place for the members of our party. The list is as follows:

London. A. McBeth Elliott, M. D., Master of Surgery.

Holland. Dr. Jan Shoemaker of the Shoemaker Clinic in The Hague, assisted by Dr. W. H. Teupken.

Berlin. Dr. Max Boehm, Medical Advisor of the German Government.

Leipzig. Dr. Wilhelm Lange, Director of the Nose and Ear Clinic of the University and of the new Pathologic Anatomical Institute.

Dresden. Dr. Rostoski and Dr. Bahrdt, Professors in the University, and Chief Surgeons of the Municipal Hospital.

Prague. Professor Arnold Jirasek, Professor of Surgery in Karlova University.

Vienna. Hofrat Dr. Anton Eiselsberg, and Hofrat Dr. Julius Wagner-Jauregg, Professors in the University of Vienna.

Munich. Professor Doctor Erich Lexer, Director of the Institute of Clinical Surgery and Professor Doctor Friedrich Mueller of the Medical Faculty.

Zurich. Professor Doctor Otto Veraguth, Dean of the University.

Berne. Dr. Karl Wegelin, Dean of the Medical Faculty. A cordial welcome from Dr. F. de Quervain.

Paris. Dr. Henri Hartman, Professor of Surgery in the University of Paris and President of the National Committee on the Development of Medical Connections.

I do not believe that this list could easily be improved upon. If it does not impress the doctors of the country I cannot imagine a list that would!

Radiological Congress. Also please point out that the week in Paris coincides with the meeting of the International Radiological Congress. President Dr. Beclere has expressed a genuine interest in having our members visit the Congress. The Congress will be comprised of six sections:

1. Radio physics
2. Radio biology
3. Radio diagnostics
4. Radio Therapy
5. Medical Electrology
6. Natural and Artificial Heliotherapy.

An exhibit will also be organized in connection with the Congress. Members who desire to take part in the festivities and receptions organized for the occasion of the Congress should send their subscription in advance to the Secretary of the Congress, Dr. R. Ledoux-Lebard, 122 Rue de La Boetie, Paris (VIII). The subscription is 300 francs ($12) for official members attending the Congress and 50 francs, ($2) per person for those accompanying the members.

The following questions will be analized:

1. Radiologic examination of the Alimentary Canal.
2. Radiologic examination of the Urinary Tract with concrete illustrations.
3. Treatment of Cancer.
4. Radiotherapy of Inflammatory Diseases.
5. Electrotherapy Diathermic of Inflammatory Diseases.

In each case a conference of thirty minutes' duration will be held in the presence of the whole assembly and members of the Congress are cordially invited to bring forth the results of their personal experience on the different subjects involved.

POST A. M. A. TRIP TO BERMUDA

A FAIRYLAND IN FACT AND FANCY

Outdoor Sports. Lovers of tennis and golf will find ample opportunity to indulge in these sports on the islands. Aside from the courts attached to the larger hotels, there are private tennis clubs and a number of golf links. A new 18-hole course has recently been completed. Cricket, of course, is the chief native game, but there are facilities as well for baseball and football for any who care to play.

Water sports, however, are the raison d'être of Bermuda in the summertime. Conditions for boating, bathing and fishing are ideal. With a native pilot, one may navigate the sounds and harbors, explore the uninhabited islands nearby, and visit headlands and bays that are not accessible by road.

The picturesque native dinghies are always at the service of visitors for a moderate consideration. These tiny open boats carry a large sail spread-a-leg-of-mutton rig, peculiar to Bermuda waters; or motor boats are available for those who prefer that type of water traveling.

Moonlight Canoeing on Still Waters. Canoeing by moonlight on still evenings, with phosphorescent water dripping silver from the paddle, and the melodious thrumming of native guitars tinkling across the bay, furnish romance and starlit dreams to youth in love.

As for bathing, Bermuda furnishes as fine as any in the Atlantic. On account of the coral reefs, the water is absolutely free from floating debris of any kind, and is unusually salty and buoyant. Either still water or surf bathing may

be had in water as delightful as that of the tropics.

Big game fishing is a popular sport in the reef-lined bays. Among the fighters that can be caught are the rockfish, sometimes running to 100 pounds in weight; the amberfish, the hogfish, porgy, bream and snapper.

A Visit to Crystal Cave. One of the interesting visits which every tourist makes is that to the caves in the Walsingham district, where Tom Moore was wont to wander in bygone days. Beneath the hills are famous grottoes, with deep, silent pools, islands, and walls of glistening calcite, groups of artistic columns, translucent draperies, myriads of tapering stalactites and stalagmites, and many other curious formations that arrest the eye by their imagery.

There is nothing more unique in Bermuda than this strange creation of lime and water many feet below the flowers and trees. Our trip includes a visit to Crystal Cave, one of the most picturesque and magnificent.

No Passports. Although Bermuda is a British colony, and thus a "foreign land," no passports are required. Visitors from the United States find themselves very much at home in this land of "pounds, shillings and pence."

Bermuda has two delightful little towns. Hamilton, the capital, is a charming picture of white

MAKE A. M. A. HOTEL RESERVATIONS EARLY

BELOW MAY BE FOUND A LIST OF HOTELS AND RATES FOR ROOMS
HOTELS AT PHILADELPHIA

	Single		Double		
Name and Address	Without Bath	With Bath	Without Bath	With Bath	Suites
ADELPHIA, 13th and Chestnut Sts.	.....	$4.00–6.00	.....	$6.00–10.00	$12.00–20.00
BARTRAM, 33rd and Chestnut Sts.	$2.00–2.50	3.00	3.00–3.50	4.00– 5.00	6.00
BELGRAVIA, 1811 Chestnut St.	.....	4.00	.....	6.00– 7.00	8.00 and up
BELLERICH, 15th and Spruce Sts.	.....	3.00–5.00	.....	4.00– 6.00	7.00– 8.00
BELLEVUE STRATFORD, Broad and Walnut Sts.	4.00–6.00	5.00–9.00	6.00–8.00	7.00–13.00	20.00–30.00
BENJAMIN FRANKLIN, 9th and Chestnut Sts.	.....	4.00–6.00	.....	6.00–10.00	12.00–30.00
CHATHAM, 20th and Walnut Sts.	.....	5.00	.....	7.00	8.00–12.00
COLONIAL, 11th and Spruce Sts.	1.50–2.50	3.00–4.00	2.00–2.50	4.00– 5.00	6.00– 7.00
DRAKE, 1512 Spruce St.	.....	4.00–6.00	.....	7.00–10.00	12.00–15.00
ELKS, Broad at Vine St.	.....	2.50–3.50	.....	5.00– 7.00	10.00–15.00
EMBASSY, 1603 Girard Ave.	2.00–3.00	3.50	2.00–4.00	5.00	.....
FAIRFAX, 43rd and Locust Sts.	.....	3.00–4.00	.....	5.00– 6.00	7.00–10.00
GLADSTONE, 11th and Pine Sts.	.....	4.00	.....	7.00	12.50
GREEN'S, 8th and Chestnut Sts.	2.00–2.50	3.00–3.50	3.50–4.00	4.50– 5.50	.....
GREEN HILL FARMS, City Line and Lancaster Pike	.....	7.00–8.00	.....	9.00–11.00	14.00–16.00
LAFAYETTE, 1339 Arch St.	2.00–2.50	3.00–3.50	3.00–4.00	5.00– 6.00	8.00–10.00
LORRAINE, Broad and Fairmount Ave.	2.50	3.00	3.50	5.00	10.00
MAJESTIC, Broad and Girard Ave.	2.00	3.00	3.50	5.00– 6.00	8.00–12.00
MARLYN, 40th and Walnut Sts.	.....	2.50–3.50	.....	4.00– 6.00	8.00–12.00
MAYFAIR, Lincoln Drive and Johnson St.	.....	3.00 and up	.....	5.00 and up	5.00 and up
MCALPIN, 111 S. Tenth St.	2.00	2.50–3.50	3.50	4.00– 5.00	7.00 and up
PENNSYLVANIA, 39th and Chestnut Sts.	.....	3.00–5.00	.....	5.00–10.00	12.00 and up
RITTENHOUSE, 22nd and Chestnut Sts.	2.00–3.00	2.50–3.50	3.00–4.00	4.00– 6.00	8.00–10.00
RITZ-CARLTON, Broad and Walnut Sts.	.....	6.00–8.00	.....	10.00–12.00	20.00 and up
ROBERT MORRIS, 17th and Arch Sts.	.....	3.00–4.00	.....	5.00– 6.00	.....
ST. JAMES, 13th and Walnut Sts.	.....	3.00–4.00	4.00–5.00	5.00– 7.00	8.00–10.00
SPRUCE, 13th and Spruce Sts.	2.50	3.00	4.00	5.00	.....
STEPHEN GIRARD, 2027 Chestnut St.	2.50	3.00	.....	4.00– 6.00	.....
SYLVANIA, Juniper and Locust Sts.	.....	3.50–5.00	.....	6.00– 8.00	12.00–15.00
TRACY, 36th above Chestnut St.	2.00	3.00	.....	5.00	4.00– 6.00
VENDIG, 13th and Filbert Sts.	.....	3.00–4.00	.....	5.00– 7.00	.....
WALTON, Broad and Locust Sts.	2.50–3.00	3.50–5.00	4.00–5.00	6.00– 8.00	12.00–15.00
WARBURTON HOUSE (Women), 20th and Sansom Sts.	2.50	3.00–4.00	4.00	5.00	6.00
WARWICK, 17th and Locust Sts.	.....	5.00 and up	.....	8.00 and up	15.00 and up
WELLINGTON, 19th and Walnut Sts.	.....	5.00	.....	6.00	10.00 and up
WINDSOR, 1219 Filbert St.	2.00	2.50–3.00	3.00–4.00	4.50– 5.00	7.00
Y. M. C. A., 1421 Arch St.	1.50–2.00	.....	3.00– 4.00	.....	.....

There should be no difficulty encountered in securing satisfactory accommodations if those who expect to attend the annual session of the American Medical Association, June 8 to 12, will send in their applications at the earliest possible time. Applications should be sent at once to Dr. Frederick S. Baldi, Chairman of the Subcommittee on Hotels, 304 Chamber of Commerce Building, 1129 Walnut Street, Philadelphia. Applicants for reservations are especially requested to include a second and a third choice in order that good accommodations may be assured if the desired reservation cannot be had at the hotel of preference.

houses, glistening in the bright sunlight, and quaint little English shops.

St. George's, a city of historical old buildings and quaint streets, was settled in 1612, three years after the Islands were claimed as a British possession by a group of colonists under Admiral Sir George Somers, shipwrecked here on their way to Virginia.

The person who wants retirement and rest during his stay can find it anywhere on the islands. There are no clattering trolley cars, no whirring, honking automobiles. The visitor easily imagines himself transported as if by magic to the quieter, less nerve-racking and more dignified days of the last century. So jealous of this feature of their home are the Bermudians that motor traffic is forbidden by law.

But we have written enough about the charms of this wonderful little spot. Visit the islands and see for yourself—and then agree with W. D. Howells, who tersely remarked after the fascinating trip:

"There is more beauty to the square foot in Bermuda than anywhere else in the world!"

If you are intrigued by the charms of Bermuda turn to page 13 of the advertising section and read how you can pronounce the "open sesame" for a delightful outing.

GEORGE PETER DREYER, Ph. D. (1866-1931)

George P. Dreyer was born in Baltimore, September 22, 1866, and until 1900 his life was spent in that city. He was educated in Baltimore City College and in Johns Hopkins University. Following his A. B. degree from Hopkins in 1887 he was fellow in Physiology '88 and '89, under the distinguished Physiologist, Newell Martin, and received his Ph. D. degree in 1890.

Dr. Dreyer's early intention was to study medicine, but his contacts at Hopkins with Martin, and later with Howell, definitely brought him to decide on Physiology as a career; a decision which he never regretted. He valued highly the acquaintances made in those earlier days. Such men as Henry Sewall, E. G. Conklin, T. H. Morgan, A. C. Abbott, C. W. Greene, Percy Dawson, Joseph Erlanger and David Lingle left pleasant and lasting memories.

From 1890 until 1900 he was Associate Professor at his alma mater and during this time he became the master of physiological technique and manipulation for which he was justly famous. No one ever saw Professor Dreyer operate without admiring his skill. As a teacher he was as successful as he was technically skillful. His demonstrations were uniformly successful, and accomplished with a facility which often hid the actual difficulties. His first humiliation occurred when he had to use spectacles to catheterize Wharton's duct. While he accepted this premonition of approaching age philosophically, he frequently spoke of it.

In 1900 Dr. Dreyer came to Chicago as Professor of Physiology and Physiological Chemistry in the College of Physicians and Surgeons, which had formed an affiliation with the University of Illinois. The conditions were far from ideal, and far from what he had anticipated. The affiliation proved to be loose, and was soon broken, and for a time, the College of Physicians resumed its proprietary status. During the interim Dr. Dreyer remained, hoping for a reunion which would bring university standards, conditions and ideals. Satisfactory conditions, however, were not established until about 1915, and to make these conditions operative, Dr. Dreyer assumed the office of Dean. In this office he developed university working conditions and ideals for others, but at the cost of his health and with the sacrifice of research for many years. While acting as Dean, he suffered an attack of pneumonia, followed by empyema which left him physically incapacitated for more than a year. While he was afterwards mentally alert and able to resume professional duties, he had not the physical stamina demanded for research. Until the time of his death, Feb. 27, he was compelled to avoid unnecessary exertion and to adopt measures to retain and to promote health.

As a health promoting measure, as well as from actual pleasure, he spent much of his leisure time in gardening, and the flower garden of his suburban home was the rendezvous of amateurs and friends.

Dr. Dreyer was a pioneer physiologist in Chicago; when he came many men on the Atlantic Seaboard could visualize only vulgarity and incivility west of the Alleghanies. So far as physiology was concerned this was "pragmatically" true. Only Jaques Loeb at Chicago and Winfield Scott Hall at Northwestern had preceded him. A. P. Mathews, David J. Lingle, George Neil Stewart, C. C. Guthrie and Alexis Carrell soon followed. All these men bore the burden and worked in the heat of the day, but none of them were exposed to the disruptive ultra-violet rays as was Dreyer. An ancient prophet said that old men dream dreams and the young men see visions. Dreyer was young and had vision, and Chicago today is physiologically what he hoped it would be. His only regret was that he was unable to contribute more to his chosen profession, but he prepared the soil for others.

During the past two years he devoted much time in planning a new laboratory in which he hoped to again resume research work. He lived to see this laboratory almost ready for occupancy, but after thirty years in the wilderness of promise, he was allowed to see, but not to enter, the promised land.

During his thirty years' service to the University of Illinois, Professor Dreyer came in contact with thousands of students and graduates. He was known to them as a great teacher, a profound student, a gentleman and a friend.

WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

NINTH ANNUAL MEETING

Philadelphia, June 8-12, 1931

Headquarters, Bellevue-Stratford Roof Garden
Registration daily, 9 A. M. to 5 P. M.

All meetings will begin precisely at the hour indicated. Please be prompt.

All women attending the convention, whether Auxiliary members or not, are invited to participate in this entire program.

PROGRAM

Monday, June 8—

12:30 P. M. In Honor of National Presidents, 1922-1932. Buffet luncheon, subscription.....Roof Garden

2:00 P. M. Three Round Tables, 35 min. each, 10 min. intermissions .....Roof Garden

Subjects

1. Programs for County Auxiliary Meetings.
2. The Technique and Value of a Committee on Public Relations.
3. History and Archives.

6:30 P. M. Board Dinner, subscription...Red Room

7:30 P. M. Board Meeting .....Red Room

Tuesday, June 9—

9:30 A. M. General Meeting .....Roof Garden

12:30 P. M. Luncheon (Bellevue Special) Roof Garden

1:30 P. M. *Bus trip to Valley Forge.
Tea in Log Cabin.
Hostesses: Berks, Chester, Delaware and Montgomery county, Pa., Auxiliaries.

or

1:30 P. M. *Boat trip on Delaware River, tea on board.
Hostesses: Bucks county, Pa., Burlington, Camden and Gloucester county, N. J., Auxiliaries.

or

2:00 P. M. Visit to Historical Society of Pennsylvania, 1300 Locust street.
Special Docent Service.
Brief address by Dr. Charles W. Burr of Philadelphia: "The Daily Life of the Colonial Physician."
Special exhibitions on view throughout the convention.

8:00 P. M. General Meeting of A. M. A.....Academy of Music

10:00 P. M. Supper dance.....Bellevue Ball Room
Hosts: The Philadelphia County Medical Society.

Wednesday, June 10—

9:00 A. M. General Meeting and Election.....Roof Garden

12:30 P. M. Auxiliary Luncheon, Subscription.....Roof Garden
Guests and speakers from A. M. A.
Music by courtesy of the Delaware State Auxiliary.

2:30 P. M. Bus trip through historic Philadelphia, Fairmount Park and Germantown.
Hosts: The Philadelphia County Medical Society. Tea at "Stenton."
Hostesses: New Jersey State Auxiliary.

8:30-11:00 P. M. Auxiliary Reception.....University Museum
Hostesses: Pennsylvania State Auxiliary. Music, Special Docent Service.

Thursday, June 11—

9:00 A. M. Board Meeting .....Red Room

10:00 A. M. Meeting for all state and county treasurers .....Roof Garden

10:30 A. M. General Round Table.....Roof Garden
Subject: "What Have I Gotten Out of the Convention?"
Opening of Question and Suggestion Box.

12:00 M. Luncheon (Bellevue Special).....Roof Garden

1:00 P. M. *Bus trip, "Longwood". Estate of Mr. and Mrs. Pierre S. duPont.

or

2:30 P. M. *Visit to Fairmount and Rodin Museums. Special Docent Service.

9:00 P. M. President's Ball .....Benjamin Franklin Ball Room
Hosts: American Medical Association.

Friday, June 12—

9:30 A. M. †Bus trip to Atlantic City, including visit to Convention Hall, ride in wheel chair (1 hour).
Luncheon at the Claridge.
Atlantic City Auxiliary in charge.
Return at 5 P. M. or 10 P. M.

or

11:00 A. M. Trip through Wanamaker's with luncheon in Crystal Tea Room.

*Bus transportation paid by members.

†Inclusive price $5.00.

"As You Like It"

Daily from 9 A. M. to 5 P. M. arrangements may be made at this Booth in the Roof Garden for golf, shopping, or any special trips desired, e. g., Historic Churches, Fairmount Park Mansions, Suburban Gardens, etc.

All tickets and invitations must be *procured in advance* in the Bellevue Roof Garden. Only programs will be obtainable elsewhere.

ILLINOIS STATE MEDICAL SOCIETY

EIGHTY-FIRST ANNUAL MEETING

EAST ST LOUIS, ILLINOIS

MAY 5, 6, 7, 1931

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RELATIONS TO THE PUBLIC HEALTH ADMINISTRATION

E. W. Mosley, *Chairman*.....Chicago
Ralph Hinton .....Elgin
E. D. Levisohn .....Chicago
F. F. Maple .....Chicago
T. B. Knox .....Quincy

MEDICAL EDUCATION AND HOSPITALS

John J. Pflock .....Chicago
W. M. Hartman.....Macomb
W. R. Marshall .....Clinton

COUNCIL COMMITTEES

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Chas. J. Whalen.....Chicago
William D. Chapman .....Silvis
James H. Hutton .....Chicago
Jean McArthur, *Secretary*.....Chicago

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William D. Chapman .....Silvis
R. R. Ferguson.....Chicago
Harold M. Camp, *Secretary*.....Monmouth

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Warren Pearce, *Secretary*.....Quincy

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Jas. T. Gregory, *Secretary*.....Chicago

SECTION ON EYE, EAR, NOSE AND THROAT

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W. C. Williams, *Secretary*.....Peoria

SECTION ON PUBLIC HEALTH AND HYGIENE

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Arlington Ailes, *Secretary* .....LaSalle

SECTION ON RADIOLOGY

Henry W. Grote, *Chairman*.....Bloomington
E. L. Jenkinson, *Secretary* .....Chicago

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W. D. Murfin, *Vice-President*.....*Decatur*
Harold Swanberg, *Secretary*.....Quincy

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G. C. Otrich, *Secretary*.....Belleville

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W. Crotty .....East St. Louis
J. Fulgham .....East St. Louis
O. Klug .....East St. Louis

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H. H. Hurd .....East St. Louis
Ed Bechtold .....Belleville
P. J. H. Fulgham.....East St. Louis

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A. B. McQuillan.....East St. Louis
C. E. Hill.....East St. Louis
O. J. Culbertson.....East St. Louis
R. F. Stanton .....East St. Louis
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H. H. Tanzer .....East St. Louis

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J. J. Donahue, *Chairman*.....East St. Louis
C. Wilson .....Belleville
W. Wilhelmj .....East St. Louis

MEETING PLACE

H. A. Cables, *Chairman*.....East St. Louis
M. E. Brennan.....East St. Louis
John Gunn .....Belleville

PRESIDENT'S DINNER

H. M. Voris, *Chairman*.....East St. Louis
C. E. Hill .....East St. Louis
W. Crotty .....East St. Louis
E. H. Holten .....East St. Louis
L. E. Wedel .....East St. Louis

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E. H. Wangelin.....Belleville
R. Campbell .....East St. Louis
T. V. Boyd .....East St. Louis

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C. E. Eisele.....East St. Louis
L. L. Madden .....East St. Louis
H. H. Hurd.....East St. Louis
A. M. Aszmann .....East St. Louis

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O. B. Boyd .....East St. Louis
W. Griffith .....East St. Louis
E. H. Holton .....East St. Louis

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Mrs. A. M. Aszmann
Mrs. J. G. Beykirk
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Mrs. H. H. Hurd
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Mrs. F. Leon
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Mrs. L. E. Wedel
Mrs. C. C. Winning
Mrs. H. J. Frein
Mrs. R. C. Heiligenstein
Mrs. C. P. Renner
Mrs. J. B. Scruggs

Women's Auxiliary to Illinois State Medical Society

President—Mrs. R. K. Packard, 6901 Paxton Avenue, Chicago.

President-Elect—Mrs. T. O. Freeman, Mattoon.

First Vice-President—Mrs. George W. Post, Jr., 1206 Ashland Avenue, River Forest.

Second Vice-President—Mrs. E. M. Stevenson, Bloomington.

Third Vice-President — Mrs. Earl Steen, Joliet.

Recording Secretary—Mrs. Frank Maple, 6728 Paxton Avenue, Chicago.

Corresponding Secretary—Mrs. F. P. Hammond, 6020 Drexel Ave., Chicago.

Treasurer—Mrs. A. H. Brumback, 1503 W. Jackson Blvd., Chicago.

COUNCILORS

Dist. 1—Mrs. H. H. West, Elgin.

Dist 2—.....

Dist. 3—Mrs. P. B. Blodgett, Chicago Heights; Mrs. P. H. Kreuscher, 5816 Blackstone Ave., Chicago; Mrs. J. R. Harger, 544 N. Kenilworth Ave., Chicago.

Dist. 4—Mrs. W. D. Chapman, Silvis.

Dist. 5—Mrs. Fredk. P. Cowdin, 1900 Wiggins Ave., Springfield.

Dist. 6—Mrs. W. A. Brittin, Virden.

Dist. 7—Mrs. Theodore Thompson, Shelbyville.

Dist. 8—Mrs. E. S. Allen, Arcola.

Dist. 9—.....

Dist. 10—Mrs. C. O. Boynton, Sparta.

CHAIRMAN OF COMMITTEES

Organization—Mrs. W. D. Chapman, Silvis.

Press and Publicity—Mrs. Louis Ostrom, Rock Island.

Legislation—Mrs. D. J. Evans, Aurora.

Printing—Mrs. G. Henry Mundt, Chicago.

Social—Mrs. R. R. Ferguson, Chicago.

Program—Mrs. George W. Post, Jr., River Forest.

Credentials—Mrs. Floyd Phillips, Arthur.

Revisions—Mrs. F. H. Pirnat, Chicago.

Public Relations—Mrs. A. H. Baugher, Chicago.

Registration—Mrs. J. R. Harger, Oak Park; Mrs. S. E. Allen, Arcola.

HEADQUARTERS—Broadview Hotel.

REGISTRATION BOOK—Ainad Temple.

WOMEN'S AUXILIARY

PROGRAM

Tuesday, May 5, 1931

10:00 a. m.—Board Meeting, Broadview Hotel.

11:30 a. m.—County Presidents meet with President-Elect Mrs. T. O. Freeman.

1:30 p. m.—Trip to Forest Park, St. Louis, visiting Lindbergh's Trophies and Zoo—for all visiting ladies.

6:30 p. m.—Dinner for Board and County Presidents.

7:30 p. m.—Opening Meeting of the Illinois State Medical Society at Shrine Temple. Principal address to be given by Richard L. Sutton, Kansas City; illustrated talk, "The Long Trek."

Wednesday, May 6, 1931

9:00 a. m.—Open Meeting for all Members and guests—Broadview Hotel.

1:00 p. m.—Luncheon—St. Clair Country Club for all Members and Guests. Speakers: Mrs. A. B. McGlothan, St. Joseph, Missouri, President-Elect Woman's Auxiliary to the American Medical Association. Mrs. G. Henry Mundt, Chicago. Bridge and golf following the luncheon program.

6:30 p. m.—President's Dinner, Illinois State Medical Society, honoring the President, William D. Chapman, and Past Presidents. This dinner at the Knights of Columbus Building.

Thursday, May 7, 1931

9:00 a. m.—New Board Meeting, with the President, Mrs. T. O. Freeman.

LADIES' ENTERTAINMENT

For all visiting ladies at the meeting.

Ladies' Registration, at Shrine Temple, General Registration Headquarters.

Tuesday, May 5, 1931

11:00 a. m.—Style Show, at Catholic Community House, 422 St. Louis Ave. Sponsored by "Seidel's Store."

1:30 p. m.—Trip to Forest Park, St. Louis, visiting Lindbergh Museum, where Lindbergh Trophies are shown, and visit to noted Forest Park Zoo, and the Art Museum.

7:30 p. m.—Opening Meeting, Illinois State Medical Society, at Shrine Temple. Principal address to be given by Richard L. Sutton, noted Big Game Hunter, Kansas City, Missouri. An illustrated talk on "The Long Trek."

Wednesday, May 6, 1931

9:00 a. m.—Meeting of Woman's Auxiliary, to which all visiting women are invited.

1:00 p. m.—Luncheon at St. Clair Country Club, followed by bridge or golf. Ladies' desiring to play golf before or after the luncheon should arrange with Mrs. O. J. Culbertson, Chairman, Ladies' Entertainment Committee.

6:30 p. m.—Annual President's Dinner at Knights of Columbus Building, honoring William D. Chapman, President, Illinois State Medical Society, and the Past Presidents.

SECRETARIES' CONFERENCE

Shrine Temple

I. L. Foulon, *President*.....East St. Louis
W. D. Murfin, *Vice-President*.....Decatur
Harold Swanberg, *Secretary* .....Quincy

Tuesday Morning, May 5, 1931, 10-12

1. "The Challenge of Syphilis"—Andy Hall, Director, Department of Public Health, Springfield.

Perhaps no single health problem is of greater importance and magnitude than syphilis. It results in a

vast amount of physical and mental delinquency and causes a much greater volume of mortality than is disclosed by a casual study of statistics.

Discussion opened by F. Buckmaster, Effingham, and C. D. Snively, Ipava.

2. "The Educational Committee and Its Relation to the County Medical Society"—Jean McArthur, Secretary, Educational Committee, Chicago.

The Educational Committee has served as a clearing house for the dissemination of health information and advice more and more frequently sought by lay groups. Individual physicians and county medical societies can strengthen their own position as leaders in health activities in their communities by definite contact with and support of the program conducted by the Educational Committee.

Discussion opened by Chas. P. Blair, Monmouth, and H. A. Elkins, Mt. Carmel.

3. "The County Society Secretary; Some of His Burdens with Few Rewards"—E. J. Goodwin, Secretary, Missouri State Medical Association, St. Louis. (By invitation.)

The selection of a member to be the Secretary of the component Society deserves considerable thought. When the office is given to the wrong individual the error is not readily apparent. He should be allowed time to demonstrate whether he is suitable for the job. A realization of his responsibility is the first burden laid upon the secretary. If he fails to envisage this he can never succeed.

Discussion opened by F. N. Wells, Pittsfield, and Elizabeth R. Miner, Macomb.

4. "Public Relations of the County Medical Society"—Nathan S. Davis III, Chicago.

The importance of the County Medical Society taking an active and constructive part in all public health activities. The folly of passing resolutions for or against any such activities unless such resolutions provide for the appointment of a committee to cooperate with the organization in question and educate them, to the viewpoint of the medical profession.

Discussion opened by H. O. Munson, Rushville, and E. E. Perisho, Streator.

5. "Medicine and Big Business"—R. R. Ferguson, President-elect, Illinois State Medical Society, Chicago.

Many articles and editorials are appearing in newspapers and magazines on the high cost of medical care, hospital operation, Our Code of Ethics and Medical Advertising, all giving us plenty of advice. Big business has almost completely broken down; shops are closed, millions idle, banks closed, seven million depositors losing, or tying up one and one-half billion dollars. Should Scientific Medicine break down as has big business, disease and famine would devour us.

Discussion opened by Lee O. Frech, Decatur, and T. D. Doan, Palmyra.

The Annual Banquet of the Secretaries will be held Tuesday evening, May 5, 1931, at 6:00 o'clock, at the Catholic Community House.

Two short addresses following the banquet:

1. "Our Duties and Repsonsibilities"—Harold M. Camp, Monmouth.
2. "The Economic Trend and Imperative Need for Change in Method and in the Attitude of Present Medical Practice"—Chas. D. Center, Quincy.

The Dinner Program will end in time for the opening meeting to be held at 7:30 p. m. at the Shrine Temple.

Meeting of the House of Delegates

Shrine Temple

Tuesday Afternoon, May 5, 1931

3:00—Meeting called to order by the President, William D. Chapman, for reports of officers, the councilors, and committees, and to transact other business that may come before the House.

Thursday Morning, May 7, 1931

8:30—Meeting called to order by the President for election of officers, councilors, committees, delegates to the American Medical Association, report of resolutions committee and for the transaction of other business that may come before the House.

At the close of this meeting, the President-Elect, R. R. Ferguson, will be inducted as President of the Illinois State Medical Society.

President's Dinner

The Annual President's Dinner will be held at the Knights of Columbus Building on Wednesday evening, May 6, 1931, at 6:30. This is an interesting function honoring our President, William D. Chapman, and the Past Presidents of the Illinois State Medical Society who will be guests at the dinner. It is hoped that every member and guest at the meeting will attend this dinner.

Dr. F. O. Fredrickson, the immediate past President, will preside as Toastmaster. A suitable dinner program will be arranged by the committee.

Tickets for the dinner can be procured at the

Registration Desk from any member of the President's Dinner Committee. The President's address and Oration in Medicine will follow the dinner, the meeting in charge of the First Vice-President, B. G. Wilcox.

The Stag

Immediately after the opening meeting on Tuesday evening, the St. Clair County Medical Society will be host to the visting members and guests. The nature of the program and entertainment will be announced during the meeting.

General Sessions

Tuesday Evening, May 5, 1931

Shrine Temple

7:30—Meeting officially opened by the President, William D. Chapman.

Invocation—Rev. Walter Schlaretzki, Pastor Federated Church, East St. Louis.

Address of Welcome—Mayor of East St. Louis.

Address of Welcome—Jos. E. Beykirch, President St. Clair County Medical Society, East St. Louis.

Report of Chairman, Committee on Arrangements—I. L. Foulon, East St. Louis.

Address—"The Long Trek." (Illustrated by lantern slides.) Richard L. Sutton, M. D., Kansas City, Mo. (By invitation.)

Dr. Sutton is one of America's greatest travelers and Big Game Hunters and he has one of the finest collections of photographs in existence, which will be shown during the talk.

Wednesday Afternoon, May 6, 1931

1:15—"Aviation Medicine, with Special Reference to the Special Examinations"—Col. Louis H. Bauer, Former Medical Director, Bureau of Aeronautics, Department of Commerce, Hempstead, Long Island, N. Y. (By invitation.)

2:00—Oration in Surgery—Evarts A. Graham, Professor of Surgery, Washington University School of Medicine, St. Louis. (By invitation.)

"Lowering the Mortality in Operations on the Biliary Tract."

Wednesday Evening, May 6, 1931

Knights of Columbus Building

7:30—President's Address, William D. Chapman, President, Illinois State Medical Society.

8:00—Oration in Medicine, W. W. Duke, Kansas City. (By invitation.)

"Allergy as Related to the General Practice of Medicine."

Section Programs

section on medicine

Shrine Temple

Lowell D. Snorf, *Chairman.*
Warren Pearce, *Secretary.*

Tuesday Afternoon, May 5, 1931

Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, and Radiology.

Program by Guest Speakers

1:00—"Heart Disease—Prevention and After Care," I. C. Riggin, Executive Secretary, American Heart Association, New York City.

1:45—"Diagnosis of Spinal Cord Lesions," Ernest Sachs, Professor of Neurologic Surgery, Washington University School of Medicine, St. Louis.

2:30—"Recent Developments in Tularemia," Walter M. Simpson, Dayton, Ohio.

3:15—"The Roentgen Examination," Edward H. Skinner, Kansas City.

4:00—"Facts Concerned in Gall Bladder Evacuation," illustrated by motion pictures, A. C. Ivy, Professor of Physiology, Northwestern University Medical School, Chicago.

4:45—"Our Present Conception of the Pathological Processes Caused by Intestinal Obstruction and Some of Its Clinical Applications," Willis D. Gatch, Professor of Surgery, University of Indiana, Medical School, Indianapolis.

These little talks are all practical and of interest to men in General Practice or to any of the Specialists. Strictly technical terms are to be avoided, to increase the value of the presentations to all physicians in attendance.

Wednesday Morning, May 6, 1931

9:00—"Luetic Aortitis," L. Feldman, Chicago.

Luetic aortitis is a frequent disease. It may appear early or late in the course of the infection. It is essentially a disease of the media, involving most commonly the first portion of the aorta. More attention should be paid to the aortic arch, for prognosis depends greatly upon early therapy.

Discussion opened by N. S. Davis III, Chicago.

9:30—"Coronary Thrombosis," Walter S. Priest, Chicago.

Approximately seventy cases of coronary thrombosis are analyzed. The subject is discussed with reference to age incidence, previous history of coronary disease, location and radiation of pain, differential diagnosis and

treatment, the subsequent course of those surviving the initial attack and the value of the electrocardiogram in the diagnosis, prognosis and management of the disease.

Discussion opened by H. A. Durkin, Peoria.

10:00—"Trauma as a Cause of Heart Disease," Fred M. P. Meixner, Peoria.

Injury to chest common in industry. Concussion of chest may produce shock and fibrillation. Obscure clinical effect and myocardial lesions may follow crushing injuries. Temporary or permanent effects of aggravation of basic lesions may follow accident and result from traumatic organic change in heart. Prognosis depends on degree of circulatory disturbance produced by defect.

Discussion opened by Don C. Sutton, Chicago.

10:30—"Chronic Vascular Occlusion of the Extremities," (lantern slide illustrations), Geza de Takats, Chicago.

Types of vascular occlusion are described. A system of examination for circulatory efficiency is demonstrated by clinical charts. The therapeutic efforts to increase collateral circulation, relieve vascular spasm and alleviate pain are presented. The differentiated diagnosis of spastic and organic occlusions and the indications for conservative and surgical measures are discussed.

Discussion opened by S. E. Munson, Springfield.

11:00—"Importance of Quantitative Diets in Diabetes and Obesity," Walter H. Nadler, Chicago.

Whereas some patients respond to simple restriction, others admittedly require accurate measurement of foods. As the dietician's work becomes more important it is unfortunate that the clinician rarely requires the ability to calculate diets and give requisite instruction. The principles involved and practice required are not difficult.

Discussion opened by Frank Deneen, Bloomington.

11:30—"Results in the Treatment of Allergic Diseases," Samuel J. Taub, Chicago.

The outlook for the patient having asthma, hay fever or other allergic disease at the present time is quite hopeful. The chances for recovery in any individual case depends on the presence or absence of organic complications, the thoroughness and completeness with which the patient is studied.

Discussion opened by E. E. Edmondson, Carbondale.

Wednesday Afternoon, May 6, 1931

3:00—"Precipitating Factors in Mental Disorders," S. N. Clark, Jacksonville.

A survey of several hundred attacks indicates that stresses may precipitate functional mental disorders. Consideration of adjustments which are difficult for the patient and of types of factors which have precipitated previous disturbances should avert future attacks in some cases. Supervision is largely in the hands of the family physician.

Discussion opened by Charles F. Read, Elgin.

3:30—"Chairman's Address," Lowell D. Snorf, Chairman, Section on Medicine, Chicago.

4:00—"The Problem of Correlating Clinical Manifestations and Pathological Changes in Nephritis," J. P. Simonds, Chicago.

Two types of nephritis; (A) with primary damage to the secretory portion of the kidneys; (B) with primary involvement of the arteries and arterioles. Both types, clinically and pathologically are progressive processes. On the above basis clinical manifestations and underlying pathology can be correlated and their inter-relations understood.

4:30—"Secondary Anemia," Richard F. Herndon, Springfield.

Frequency and clinical importance of secondary anemias. The etiological mechanisms involved and their recognition. Classification, consideration of special forms. Treatment by diet and medication.

5:00—"Primary Anemia," W. P. Armstrong, Jr., Springfield.

A discussion of primary anemias, giving briefly the course, signs, diagnosis, treatment and prognosis, with special reference to the continued treatment of pernicious anemia.

Discussion of anemia papers opened by S. R. Hoover, Quincy.

Thursday Morning, May 7, 1931

9:00—"The Treatment of Pyelitis in Children with B Coli Bacteriophage," Gerald M. Cline, Bloomington.

This paper is entirely practical in that it includes reports of the results of a few cases in which B Coli bacteriophage was used subcutaneously in the treatment of pyelitis in children.

Discussion opened by H. S. Maupin, Quency.

9:30—"A Review of Some of the Advances in Gastro-Intestinal Diseases," Joseph G. Beykirch, East St. Louis.

10:00—"Clinical Significance of Roentgenologic Findings of the Stomach and Duodenum" (lantern slide demonstration), Sidney A. Portis, Chicago.

Modern Gastro-Enterology has become dependent upon a correct interpretation of the roentgenological findings of the stomach and duodenum. The extent of pathology present based upon the clinical story and

findings may be misleading in view of the roentgenological evidence. The question of medical or surgical management in any given case can almost be determined by the roentgenological findings.

Discussion opened by Harold Swanberg, Quincy.

10:30—"Restlessness in Infancy," John Carey, Joliet.

With the present trend of preventive medicine now before us each age group examined points out defects which, had they been discovered at an earlier date, might have been prevented in infancy. If a defect is noted early in a baby's life, is it not justifiable to believe much of the underweight in school children, the anemias and anorexia and perhaps the neurotic child would be eliminated?

Discussion opened by George Edwin Baxter, Chicago.

11:00—"Tuberculosis of the Skin," Cleveland J. White, Chicago.

Some twenty-two cases of tuberculosis of the skin (a few of whom had lesions also in the mouth) have been observed in the past 3 years. Several illustrative cases are cited with emphasis on the clinical and histological findings. Therapy is discussed at length.

Discussion opened by W. B. Wakefield, Peoria.

SECTION ON SURGERY

Shrine Temple

J. H. Bacon, *Chairman.*
Jas. T. Gregory, *Secretary.*

Tuesday Afternoon, May 5, 1931

Joint Session with Sections on Medicine, Public Health and Hygiene and Radiology

Program by Guest Speakers

1:00—"Heart Disease—Prevention and After Care," I. C. Riggin, Executive Secretary, American Heart Association, New York City.

1:45—"Diagnosis of Spinal Cord Lesions," Ernest Sachs, Professor of Neurologic Surgery, Washington University School of Medicine, St. Louis.

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4:45—"Our Present Conception of the Pathological Processes Caused by Intestinal Obstruction and Some of Its Clinical Applications," Willis D. Gatch, Professor of Surgery, University of Indiana Medical School, Indianapolis.

These talks are all practical and will be of interest to all physicians whether in General work or in one of the Specialties.

Wednesday, May 6, 1931

9:00—"Acute Pancreatitis," P. E. Hopkins, Chicago.

A brief description of the etiology, symptomatology, diagnosis and treatment, laying special stress upon the thought that acute pancreatitis is a more common condition than is readily recognized.

Discussion opened by Fred H. Gunn, East St. Louis.

9:30—"Injuries to the Kidney," Harry C. Rolnick, Chicago.

This report covers a review of a large series of cases. The vast majority are subcutaneous injuries. There are a few cases of penetrating wounds of the kidney and also a few cases of subcutaneous rupture of hydro- and pyo-nephrosis. The chief symptoms are reviewed, particularly those of renal ileus. With few exceptions treatment has been conservative, non-operative. This latter is particularly emphasized.

Discussion opened by Royal Tharp, East St. Louis.

10:00—"The Role of Prophylaxis in Obstetrics," Frank F. Maple, Chicago.

Our obstetrical death rate is high, mortality, almost the rule, infections, obstetrical accidents, toxemias, the present factors. Almost all are preventable. Treatment must be prophylactic, with estimation of systemic condition, obstetrical diagnosis, and hygiene of pregnancy. Interference in labor limited to indications and a physiological conduct of the third stage.

Discussion opened by A. R. Jarman, White Hall.

10:30—"Multiple Myeloma," Charles D. Center and Thomas J. Merar, Quincy.

Multiple myeloma is a rare malignant disease of the bone marrow, arising chiefly in ribs, vertebrae, and sternum, often exhibiting widely diffuse osseous involvement. Review of literature—Cardinal diagnostic points are Pain—Tumor—Fracture—Deformity—Kidney Involvement—Blood Picture—x-Ray—Presentation of a case report.

Discussion opened by R. W. McNealy, Chicago.

11:00—"The Maggot Treatment of Osteomyelitis," Jacob Myers and Leo Czaja, Chicago.

Previous treatments for osteomyelitis have seemed inadequate. This statement is substantiated by a statistical study of end results as found in the literature. The maggot treatment administered according to the

technique of Wm. S. Baer results in healing without sinuses and quick return to function.

Wednesday, May 6, 1931

3:00—"Diagnosis of Hyperthyroidism," E. P. Sloan and Frank Deneen, Bloomington.

The diagnosis of toxic goiter rests upon the determination of the type and severity of toxemia, degree of risk, and prognosis. The treatment is indicated by the type, duration, severity, and complications present, the risk involved and the prognosis under different forms of treatment.

Discussion opened by R. K. Packard, Chicago.

4:00—"Fractures About the Elbow Joint," (illustrated by lantern slides), Philip H. Kreuscher, Chicago.

Elbow fractures always present a difficult problem. Diagnosis, especially in children, is often difficult to make from physical examination and the x-ray film. Mistakes in x-ray exposure and diagnosis must be avoided. Every effort should be made to secure a reduction without open operation. The experience and judgment of the surgeon must determine his course of procedure. Special stress is made upon the immediate and remote injury to the ulnar nerve into the epiphyseal center in children. Complications such as Volkmann's contracture and Myositis should be avoided in every possible way. Early motion is imperative in majority of cases.

Discussion opened by George W. Stabin, Springfield.

4:30—"Post-Operative Management of Abdominal Operation," C. David Brown, Chicago.

This paper in the introduction emphasizes the importance of the post-operative care, and the contents discusses the present prevalent mistakes, and outlines suggestions for the management of numerous and not uncommon complications.

Discussion opened by A. P. Standard, Macomb.

5:00—"The Surgical Treatment of Carcinoma of the Colon," George De Tarnowsky, Chicago.

A plea is made for more radical resections with restoration of the continuity of the Colon. A permanent colostomy, in general, is only indicated in extensive carcinomas of the Sigmoid or where metastases preclude the possibility of a permanent cure. An osteoplastic modification of the Kraske operation is offered in order to overcome herniation of the sigmoid after resection and anastomosis.

Discussion opened by C. U. Collins, Peoria.

5:30—"Mal-Practice," J. R. Ballinger, Chicago.

An arrangement in brief form of the Medico-Legal complaints against doctors that have come before the medico-legal committee for the past fourteen years. Attempting to set forth the legal position of the physician in these cases, and what he should do to prevent being sued, and what he should do in event a suit is brought against him.

Thursday Morning, May 7, 1931

9:00—"Fractures of the Upper End of the Femur" (lantern slide demonstrations), Frank G. Murphy, Chicago.

This paper consists of a brief mention of important literature contributions, the principal causal factors, the theory of the healing process, and the changes that occur after treatment is completed. The treatment that was used is given with a lantern slide demonstration of the cases before and after treatment, and for a variable length of time following treatment.

Discussion opened by Frank G. Murrah, Herrin.

9:30—"Surgical Treatment of Chronic Arthritis," M. A. Bernstein, Chicago.

1. The role played by the synovial lining of the joint in chronic arthritis.
2. The manner in which the synovial membrane is involved and the effect upon the articular cartilage of the bone.
3. The symptoms and clinical findings of a chronic articular joint.
4. The Roentgen examination and its interpretation.
5. The surgical treatment showing pathological slides of tissue removed and moving pictures of the after-results.

Discussion opened by S. M. Miller, Peoria.

10:00—"Multiple Infections Within the Abdomen," Carl E. Black and Ellsworth Black, Jacksonville.

Dry Clinic.

A case of multiple infections within the abdomen, Gastric Ulcer, Cholecystitis, Appendicitis, Jejunal Ulcer and Fistula. Gastro-jejunostomy, Cholecystotomy, Appendectomy, Cholecystectomy, Intestinal Resection and anastomosis. A problem in primary and secondary, and complicating infections.

11:00—"Factors Which Govern Successful Prostatectomy," Frank M. Phifer, A. J. Sullivan and I. F. Volini, Chicago.

This paper will be considered from the factor which interests the surgeon, from the factor which interests the medical man, and will be a correlation of these facts which make for a lower mortality when doing a prostatectomy.

Alternate Paper:

To be read from title only, provided there is no place on program.

"Viosterol in Pregnancy," Garwood C. Richardson, Chicago.

Election of Officers of the Section.

SECTION ON EYE, EAR, NOSE AND THROAT

Shrine Temple

Harry S. Gradle, *Chairman.*

Wright C. Williams, *Secretary.*

Tuesday Afternoon, May 5, 1931

1:00—Surgery of the Structures Related to the Inner Canthus of the Eye. Lantern illustrations. Vilray P. Blair, St. Louis. (By invitation.)

1:40—"Resume of Laryngeal Embryology," lantern demonstration, O. M. Steffenson, Chicago.

The paper describes the early beginnings of the tracheo-bronchial tree in the groove on the anterior pharyngeal wall and continues with an outline of the continuous development of the cartilages, muscles and nerves of the epiglottis, the thyroid, cricoid and the arytenoid structures.

Discussion opened by John A. Cavanaugh, Chicago.

2:00—"Fibro-Sarcoma of Orbit and the Krönlein Operation," report of a case, lantern demonstration, O. D. Cunningham, Rockford.

A boy 17 developed proptosis of the left eye with pain, poor vision and diplopia. The tumor removed by the Krönlein operation proved to be a fibro-sarcoma. The orbit was not eviscerated, but Roentgen therapy given. Two years later there are no signs of recurrence. The vision is 20/20 with correction and there is a ptosis of the lid.

Discussion opened by George F. Suker, Chicago.

2:20—"Embryological Development of the Nasal Accessory Sinuses," lantern demonstration, W. L. Hanson, East St. Louis.

The maxillary sinus primitively is an evagination of the mucous membrane of the floor of lateral wall of the infundibulum ethmoidale. The recessus frontalis is the rudiment of the frontal sinus and certain of the anterior group of the ethmoid cells. The sphenoidal sinus primarily arises in relation with the posterior cupola of the cartilaginous nasal capsule.

Discussion opened by O. M. Steffenson, Chicago.

2:40—"Congenital Dacrocystitis," Harry W. Woodruff, Joliet.

Report of cases. Anatomy of the infant nasal duct. Etiology of dacrocystitis in the infant. Diagnosis. Differential diagnosis from conjunctivitis. Treatment. Futility of using drops, argyrol, etc. Necessity of making the nasal duct patent. Use of No. 1 Bowman probe under general anesthesia. In some cases the use of counter pressure in the inferior meatus is necessary.

Discussion opened by Ralph Fox, Bloomington.

3:00—"Dust Sensitization in Relation to Hay Fever," L. B. Bernheimer, Chicago.

There are Hay Fever sufferers sensitized to house dust. Good clinical results are obtained only when these individuals are desensitized to the dust Atopin as well as to the pollen. A method for dust desensitization is described, with report of cases.

Discussion opened by Myron E. Kahn, Chicago.

3:20—"Recurrent Hemorrhages into the Vitreous—Eale's Disease"; report of a case, W. R. Fringer, Rockford.

A moderately detailed account of a case of recurrent hemorrhages into the vitreous of a vigorous boy of 16, extending over a period of eight years. The treatment and result. A discussion of the etiology as given by various authors. The use of pilocarpine sweats to hasten the absorption of the blood.

Discussion opened by H. W. Woodruff, Joliet.

3:40—"Transient Hyperopia and Reduced Accommodation in Diabetes Mellitus," C. W. Geiger, Kankakee.

A review of the literature regarding transient hyperopia and the changes of accommodation complicating diabetes. The presentation of two cases showing changes in accommodation and three cases of transient hyperopia occurring during the early treatment of diabetes. The question of cycloplegia in such cases is also raised in order to rule out possibility of criticism.

Discussion opened by E. C. Spitze, East St. Louis.

4:00—"The Effect of Diathermia Upon Deafness," M. R. Guttman and Max Kulvin, Chicago.

This paper will deal with an audiometric survey of about fifty patients that have been suffering from deafness and in some instances from tinnitus also. The effect of medical diathermia upon the hearing is established by comparison of the audiograms taken before and after treatment. The doubtful value of medical diathermia in deafness as well as its uncertain effect upon tinnitus is emphasized.

Discussion opened by Frank J. Novak, Chicago.

4:20—"Orbital Cellulitis and Abscess from Sinusitis," Howard C. Ballenger, Chicago.

This paper consists in an analysis of all cases of orbital cellulitis and orbital abscess seen at the Children's Memorial Hospital, Chicago, from 1923 to 1930, inclusive. From the records these complications and especially orbital abscess, are not so common as is popularly supposed. A resume of the medical and surgical treatment is given.

Discussion opened by T. C. Galloway, Evanston.

4:40—"Ophthalmia Neonatorum," N. K. Lazar, Chicago.

The paper will deal with the bacteriological types, prophylaxis and treatment of ophthalmia neonatorum. It is based on a study of 80 cases of ophthalmia neonatorum, representing approximately 4,000 births.

Discussion opened by C. S. Turner, Peoria.

5:00—"Edema of the Larynx: Its Etiology and Treatment." Lantern demonstration. C. D. Sneller, Peoria.

Edema of the larynx is an objective clinical phenomenon and not a disease. Certain definite types may be differentiated. Etiologically it may arise 1. because of conditions occurring within the larynx, 2. secondary to inflammation of structures adjacent to the larynx, or 3. associated with systemic diseases. The high mortality is primarily because of too long delay in direct relief of the laryngeal edema.

Discussion opened by W. A. McNichols, Dixon.

6:30—Annual banquet of the section with illustrated lecture by Dr. Richard L. Sutton, Kansas City, Missouri, on "Big Game Hunting."

Wednesday Morning, May 6, 1931

9:00—"Refinements in Surgery of the Tonsils including Electro-Surgery." (illustrated by motion pictures), F. B. Balmer, Chicago.

Electro-coagulation is a method par excellence for the removal of post-operative tonsillar tissue, etc., growths and malignancies. In cases accompanied by serious involvement of the heart, lung and kidneys; vascular dyscrasias; syphilitics, aged and infirm, and in those adults who refuse the usual surgical removal. It is a safe, tedious, time-consuming, ultra-conservative procedure requiring judgment, technical skill, patience and meticulous care.

Discussion opened by Austin A. Hayden, Chicago.

9:20—"Electro-Surgical Extirpation of the Tonsils in the Tuberculous. Preliminary Report." A. R. Hollender, Chicago.

It is generally recognized that surgical tonsillectomy is a contra-indicated procedure during active pulmonary tuberculosis. This study is based on electrosurgical extirpation of the tonsils in all classifications of pulmonary tuberculosis. Observations, final results, and conclusions.

Discussion opened by Francis L. Lederer, Chicago.

9:40—"The Avoidance of Complications in Tonsillectomy," Jerome W. Hayden, Chicago.

Complications of tonsillectomy both local and general, while not of frequent occurrence, do occur. These complications ofttimes of a very serious import and arise in cases that are presumably normal preoperatively. Serious or even fatal trouble may often be avoided by a more thorough history and examination before operation.

Discussion opened by Ralph H. Woods, LaSalle.

10:00—"Choked Disc and Optic Neuritis." A photographic demonstration. Arthur J. Bedell, Albany, N. Y. (By invitation.)

11:00—"Experiences with Chronic Deafness," W. V. Mullin, Cleveland, Ohio. (By invitation.)

Wednesday Afternoon, May 6, 1931

General Session, Shrine Temple

1:15—Aviation Medicine, with Special Reference to the Special Examinations, Col. Louis H. Bauer, former medical director, Bureau of Aeronautics Department of Commerce, Hempstead, Long Island, N. Y. (By invitation.)

This address will be given at a General Session, immediately preceding the Oration in Surgery.

2:00—Oration in Surgery. (General Session.)

Immediately following the Oration in Surgery, the members of this section will be provided with transportation to the new McMillan Hospital, the Eye, Ear, Nose and Throat Department of the Washington University School of Medicine, St. Louis, where the section will be guests of Dr. Howard and Dr. Dean.

SECTION ON PUBLIC HEALTH AND HYGIENE

Chas H. Miller, *Chairman.*

Arlington Ailes, *Secretary.*

Tuesday Afternoon, May 5, 1931

Shrine Temple

Joint Meeting with Sections on Medicine, Surgery and Radiology. Program by Guest Speakers.

1:00—"Heart Disease—Prevention and After Care," I. C. Riggin, Executive Secretary, American Heart Association, New York City.

1:45—"Diagnosis of Spinal Cord Lesions," Ernest Sachs, Professor of Neurologic Surgery, Washington University School of Medicine, St. Louis.

2:30—"Recent Developments in Tularemia," Walter M. Simpson, Dayton, Ohio.

3:15—"The Roentgen Examination," Edward H. Skinner, Kansas City.

4:00—"Facts Concerned in Gall Bladder Evacuation" (illustrated by motion pictures),

A. C. Ivy, Professor of Physiology, Northwestern University Medical School, Chicago.

4:15—"Our Present Conception of the Pathological Processes Caused by Intestinal Obstruction and Some of Its Clinical Applications," Willis D. Gatch, Professor of Surgery, University of Indiana Medical School, Indianapolis.

Wednesday Morning, May 6, 1931

8:30—Some Experimental Work in Anterior Poliomyelitis, H. J. Shaughnessey, Springfield.

8:50—Treatment of Anterior Poliomyelitis with Immune Serum, H. A. Orvis, Winnetka.

The essayist will review some of the recent literature on the use of immune serum in the treatment of Poliomyelitis. Some observations in the cases with and without serum during the past year. A discussion of the responsibility of both departments of health and practitioners to make both donors and serums available to the general profession.

Discussion opened by Lloyd Arnold, Chicago.

MENTAL HYGIENE SYMPOSIUM

9:30—"The Relationship between Mental Deficiency and the Field of General Medicine," (illustrated by motion pictures), Groves B. Smith, Beverly Farm.

This paper will embrace the practical importance of mental deficiency in the daily practice of a physician, the importance of early recognition and treatment of the organic injuries to the central nervous system, the importance of specialized education and the sociological consideration as in the light of the present day information. The paper will be supplemented by a moving picture demonstration of cases illustrating certain aspects of the subject.

10:00—"Mental Hygiene in the Home," Frank Parsons Norbury, Jacksonville.

The family is the social unit of human relations. Mental Hygiene as a science in its application to individual, family and community behavior problems, has a strategic point of attack which aids in tracing effect to cause. The philosophy and technic of family mental hygiene, justifies its application as a special service coming within the purview of medical service.

10:20—Facilities for Treatment of Mental Disease and Cost, Charles F. Read, Elgin.

11:00—Diagnosis—Clinical Demonstration of Clauses of Mental Diseases, Ralph C. Hamill, Chicago.

Wednesday Afternoon, May 6, 1931

3:00—Modern Psychiatry and Criminology, Meyer Solomon, Chicago.

Modern Psychiatry is interesting, not merely in institutional psychiatry, but also in all behavior problems, including the problems of criminology. Psychiatry's contribution to criminology includes the detection and separation of the mentally deranged and mentally retarded, suggestions in the disposition of other maladjusted personalities, advice in probation and parole cases, the more intensive individual study of delinquents and criminals with an estimate of probable causes, outcome and recommendations for management. The basis of the psychiatric approach is a professional, progressive, scientific attitude toward the problems of criminology, the ideal goal and practical suggestions are given.

3:20—Shall Mental Disease Come Under Public Health Regulation, Arnold H. Kegel, Commissioner of Health, Chicago.

3:40—Heat Therapy in Paresis, Sidney Wilgus, Rockford.

4:00—Discussion—Symposium.

1. Diagnosis, F. J. Gerty, Chicago.
2. Prevention, W. A. Evans, Chicago.
3. Care, H. Douglas Singer, Chicago.
4. Crime, Judge John P. McGoorty, Chief Justice, Criminal Court of Cook County, Chicago. Judge Sonsteby, Municipal Court, Chicago. Arnold H. Kegel, Commissioner of Health, Chicago.

Thursday Morning, May 7, 1931

8:30—Public Health Aspects of the Cancer Problem, Roswell T. Pettit, Ottawa.

Cancer is increasing at an alarming rate; 47 per cent. in men and 21 per cent. in women in less than 25 years. Certainly of sufficient importance to attract the attention of public health agencies. Is this increase due to

(a) More efficient control of infectious diseases? or

(b) Actual increase?

Can better methods of diagnosis and treatment be applied?

Discussion opened by Gilbert Fitzpatrick, Chicago.

9:00—Aspects of Medical Quackery, Henry R. Krasnow, Chicago.

Three aspects:

1. Scientific—Diagnosis and treatment.
2. Social—Involving welfare of the group.
3. Economic—Financial condition of patient, the income of the physician.

Extent of victimization of the public.

Trends in quackery and reasons therefor.

Necessity for control—agencies which should cooperate—outlook for success.

Discussion opened by Arthur J. Cramp, American Medical Association, Chicago.

9:30—Factors in Tuberculosis Which Make It a Public Health Problem, D. D. Monroe, Edwardsville.

Discussion opened by R. W. Dunham, Ottawa.

10:00—Value in Bedside Nursing in a Public Health Program, Margaret McGreevy, R. N., LaSalle.

Families and physicians appreciate the care of their sick given by public health nurses in the home. Our experience in our Health Department shows that good bedside nursing has resulted in better all-around cooperation for all other phases of public health education. This definite relationship has much to do with the success of our prenatal, infant welfare, preschool and school program.

Discussion opened by Mrs. Irene McCullough, Director of Nurses, Metropolitan Life Insurance Company, Chicago.

10:30—"The Medical Profession and the Health Department," Allen J. McLaughlin, Chicago.

Establishment of the ideal relation between doctor and Health Department will effect the solution of certain fundamental Public Health problems which are now unsolved. The problems are:

1. Maternity and infancy.
2. The pre-school child.
3. Preventive treatment of the patient with slight or no symptoms.
4. The cost of medical care.
5. Better distribution of young graduates.
6. Prevention of State Medicine.

Election of officers of the Section for 1931-32.

SECTION OF RADIOLOGY

Shrine Temple

Henry W. Grote, *Chairman.*

E. L. Jenkinson, *Secretary.*

Tuesday Afternoon, May 5, 1931

Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene.

Program by Guest Speakers.

1:00—"Heart Disease—Prevention and After-Care," I. C. Riggin, Executive Secretary, American Heart Association, New York City.

1:45—"Diagnosis of Spinal Cord Lesions," Ernest Sachs, Professor of Neurologic Surgery, Washington University School of Medicine, St. Louis.

2:30—"Recent Developments in Tularemia," Walter M. Simpson, Dayton, Ohio.

3:15—"The Roentgen Examination," Edward H. Skinner, Kansas City.

4:00—"Facts Concerned in Gall Bladder Evacuation" (illustrated by motion pictures), A. C. Ivy, Professor of Physiology, Northwestern University Medical School, Chicago.

4:45—"Our Present Conception of the Pathological Processes Caused by Intestinal Obstruction and Some of Its Clinical Applications," Willis D. Gatch, Professor of Surgery, University of Indiana Medical School, Indianapolis.

Wednesday Morning, May 6, 1931

1. "Early Recognition of Gas Bacillus Infection by X-Ray," Harry A. Olin, Chicago.

All crushing injuries and compound fractures should be suspected of possible gas bacillus infection. Prophylaxis consists of combined anti-gangrenous and anti-tetanic serum. X-ray findings are emphasized, especially early recognition by Roentgenograms in the first 24 hours. As infection is menace to life and limb 400 CC of combined serum intravenously is advocated as a dose in doses of 50 CC every eight hours. Bacteriology, treatment and summary are given with a report of two cases.

Discussion opened by G. E. Morgan, Mattoon.

2. "Factors Concerned in Radiation Therapy of Malignant Disease," L. R. Sante, Professor of Radiology, St. Louis University, St. Louis, Missouri. (By invitation.)

The factors influencing the successful irradiation of malignant disease are outlined and discussed. Size, extent and location of tumor growth a vital consideration in its treatment. The degree of radiosensitiveness of the individual tumor cells is a condition over which we have no control and one which largely determines our success or failure in radiation therapy. Attacking a growth by interference with its nutrition is sometimes successful even on resistant growths. Influence of environment on cell nutrition as determining factor in ultimate destruction of tumor cells. A practical working formula for the irradiation of malignant disease is described.

Discussion opened by E. L. Jenkinson, Chicago.

3. "The Present Status of the Treatment of Carcinoma of the Uterine Cervix, a Resumé of Methods Used and Results Achieved in Leading European Clinics," Roswell T. Pettit, Ottawa.

In cancer of the cervix it has been definite demonstrated that radium is of greater value than radical surgery. With the improvement in methods as proven by careful statistical study of thousands of cases the permanent cures reported are greater each year,—now better than 30 per cent. Methods employed and results achieved in leading European clinics will be discussed.

Discussion opened by Henry Schmitz, Chicago.

4. "X-Ray Aspect of Gastric Carcinoma," James T. Case, Chicago.

Discussion opened by C. U. Collins, Peoria.

5. "X-Ray Findings in Pneumonoconiosis," F. Flinn, Decatur.

Discussion opened by B. H. Orndoff, Chicago.

6. "The Present Status of Penetrating X-Rays and Radium in Deep-Seated Cancer and Other Diseases," Edwin C. Ernst, St. Louis, Missouri. (By invitation.)

The modern possibilities of the use of high filtered x-rays and radium will be discussed with special reference to the indications and applications to every day medical problems. In the light of recent radiological researches the favorable and unfavorable responses of benign and malignant tumors to this type of highly filtered radiation energy will be given equal consideration.

Discussion opened by W. G. Bain, Springfield.

7. "Evaluation of Radiology in Pediatrics," Gerald M. Cline, Bloomington.

This subject includes diagnostic roentgenograms of usual and unusual cases encountered in routine Pediatric practice. Case records will be exhibited by slides and descriptions, especially with follow-up records. Such cases will include diseases of the new born,—cases of malnutrition, chest pathology, abdominal, and bone pathology.

Discussion opened by Harold Swanberg, Quincy.

Thursday Morning, May 7, 1931

1. "Roentgenotherapy of Conditions Other Than Malignancy," I. S. Trostler, Chicago.

Discussion opened by E. G. C. Williams, Danville.

2. "The Value of X-Ray Therapy in Malignant Diseases," Cassie B. Rose, Chicago.

This paper is a discussion of the palliative relief which may be obtained by moderate doses of radiation therapy in both primary and metastatic malignancy, particularly in the case of bone lesions. Recalcification in bone. Relief of clinical symptoms. Prognosis. Technique of treatment. Illustrative cases. Lantern slides.

Discussion opened by I. S. Trostler, Chicago.

3. "Treatment of Breast Carcinoma," Benjamin H. Orndoff, Chicago.

Discussion opened by J. K. P. Hawks, Bloomington.

4. "The Relation of Biological Effect to Effective Wave Length and Portal Size," E. G. C. Williams, Danville.

The dependence of biological effect upon wave length and portal size in x-ray therapy is shown in the possibility of increasing dosage as the wave length is shortened and the decreased skin tolerance as portal size is increased. These changes are controlled by the amount of radiation absorbed and increase of long wave length effect from back scatter.

Discussion opened by Perry Goodwin, Peoria.

5. "X-Ray Therapy in Skin Diseases," Arthur W. Erskine, Cedar Rapids, Iowa. (By invitation.)

A discussion of the physiological action of radiation. The selection of Dermatological conditions suitable for treatment by x-rays based upon their action. Precautions. The advantages of a simplified technique. Results to be expected from x-ray therapy in a few common skin diseases.

Discussion opened by M. F. Engman, Professor Clinical Dermatology, Washington University School of Medicine, St. Louis. (By invitation.)

6. "Phrenicoexeresis in the Treatment of Pulmonary Tuberculosis," George M. Landau, Chicago.

The essayist believes that in the treatment of unilateral pulmonary tuberculosis, that treatment of choice should be Phrenicoexeresis, it being by far superior to artificial pneumothorax with its attending hydrothorax and contrary to belief, high mortality rate. The curative results thus far obtained far outweigh the objection of a permanently paralyzed one-half diaphragm.

Discussion opened by Jerome Head and Otto Schlack, Chicago.

7. "X-Ray in Diagnosis of Thoracic Pathology," Hermon Harrison Cole, Springfield.

1. General discussion of (1) General practice, (2) Group Medicine, (3) Limited specialization.

2. Place of the Roentgen Ray in diagnosis of chest conditions. Its use and abuse.

3. Limitations of physical examination and of x-rays. Danger of attempting too much from insufficient evidence.

4. Writer's general rules in the Use of X-Ray. A resume of experience both good and bad.

8. "The Roentgen Diagnosis of Bronchiectasis, Adolph Hartung, Chicago.

Roentgen findings depend on stage of development and type and location of lesions. Vary from such uncertain signs as increase of the linear markings and irregular densities to almost pathognomonic honey-comb appearance. In conjunction with clinical findings they should lead to a correct diagnosis. Iodized oil injections confirmatory and show location and extent of lesions.

Discussion of these papers opened by L. R. Sante, St. Louis. (By invitation.)

RULES GOVERNING THE PRESENTATION OF PAPERS

All papers read by members shall be limited to twenty minutes and remarks in discussion to

five minutes, floor privilege being allowed only once for the discussion of any one subject.

All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section when read and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and will not appear in medical print before it has been published in the ILLINOIS MEDICAL JOURNAL.

A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of the regular session if time permits, or as an alternative at the end of the program.

All discussions shall be confined strictly to the subject in hand.

No paper shall appear in the printed transactions of the meeting unless read in full or in abstract.

(From the By-Laws of the Illinois State Medical Society.)

EXHIBITORS AT 1931 ANNUAL MEETING

American Medical Association, 535 North Dearborn Street, Chicago.

A. S. Aloe Company, 1819 Olive Street, St. Louis.

Chicago Health Department, Chicago.

DePuy Manufacturing Company, Warsaw, Indiana.

DeVilbiss Company, Toledo, Ohio.

Dick X-Ray Company, St. Louis.

General Electric Corporation, Jackson Blvd. & Robey St., Chicago.

Gerber Products Division, Freemont Packing Company, Freemont, Michigan.

Horlicks Malted Milk Corporation, Racine, Wisconsin.

Huston Brothers Company, 185 North Wabash Avenue, Chicago.

Illinois Department of Public Health, Springfield.

Illinois Society for Mental Hygiene, Chicago.

Illinois Tuberculosis Association, Springfield.

Kellogg Company, Battle Creek, Michigan.

Loyola University School of Medicine, Chicago.

W. W. McMaster, Peoria.

Mead Johnson & Company, Evansville, Indiana.

Medical Protective Company, 360 North Michigan Blvd., Chicago.

Mellin's Food Company, 177 State Street, Boston, Mass.

V. Mueller & Company, Ogden Avenue & VanBuren Street, Chicago.

Petrolagar Laboratories, 536 Lake Shore Drive, Chicago.

Chas. H. Phillips Chemical Company, 170 Varick Street, New York City.

Post Graduate School of Surgical Technique, Chicago.

W. B. Saunders Company, West Washington Square, Philadelphia.

Section on Radiology, Illinois State Medical Society.

Sharp & Smith, 65 East Lake Street, Chicago.

S. M. A. Corporation, Cleveland, Ohio.

Tailby-Nason Company, Boston, Mass.

University of Illinois School of Medicine, Chicago.

U. S. Fidelity & Guaranty Company, St. Louis.

Vilray P. Blair, St. Louis.

Washington University School of Medicine, St. Louis.

SCIENTIFIC EXHIBITS

We expect to have the finest scientific exhibits at the meeting, that we have yet had. The list, and definite showing, yet incomplete.

The American Medical Association will exhibit some very interesting material to show what the Association is doing not only for the Medical Profession, but also showing what it is doing to protect the citizens of our Country.

Council on Pharmacy and Chemistry: Posters and specimens illustrating the efforts of this Council in the interests of scientific medicine and rational prescribing.

American Medical Association Chemical Laboratory: Posters and specimens bearing on such subjects as newer synthetics, comparative prices of proprietary and non-proprietary remedies, and drug control.

Bureau of Investigation: A series of educational posters on the nostrum evil and quackery prepared by the Bureau for the use of physicians, health officials, schools and colleges.

Council on Medical Education and Hospitals: Posters and charts on hospitals for nervous and mental diseases.

Bureau of Health and Public Instruction: Charts and posters of the health education series, of infant welfare series and how the doctor prevents disease.

Bureau of Legal Medicine and Legislation: Posters showing the activities of the Bureau, extent of medical defense activities of constituent associations,—states having basic science requirements,—states having annual registration requirements,—states providing for eugenic sterilization of the feeble-minded.

American Medical Association Library: Graphic demonstration by charts and posters of the various services rendered by the library to the individual physician. An exhibit of the *Quarterly Cumulative Index Medicus*, specimens illustrating the reference service, samples of package libraries and periodical lending service.

Council on Physical Therapy: Posters, apparatus and charts demonstrating ultra-violet light.

These are among the many interesting things to be shown in the scientific educational exhibit of the American Medical Association.

The Illinois State Department of Public Health will show many interesting things which the State Health Department is doing to protect the health of the citizens of Illinois. Several of these large exhibits have been built jointly by the State Department of Health, and the University of Illinois College of Medicine. The

first of these exhibits was shown at the annual meeting in Joliet last year, showing the various manifestations of Pneumonia. This exhibit will be shown again this year, and in addition, similar exhibits will be shown on Typhoid Fever, Tuberculosis, Diphtheria, Pneumonia and Cancer.

In addition to these excellent exhibits, the Department will display and demonstrate the State Department's Laboratory Facilities.

These interesting exhibits have been procured for this meeting through the cooperation of the Section on Public Health and Hygiene of the Illinois State Medical Society.

The University of Illinois School of Medicine will join with the State Department of Health in showing these interesting exhibits mentioned above. Other interesting exhibits will be shown by our University Medical School, and will be in charge of Department heads, from that school.

The Illinois Society for Mental Hygiene will have an interesting exhibit which will be in charge of Helen L. Myrick. This will exhibit many interesting things in connection with the Mental Hygiene activities, and has been arranged in conjunction with the Section on Public Health and Hygiene.

The Chicago Health Department will display an interesting exhibit which will be in charge of the City's Health Commissioner, Dr. Arnold H. Kegel, of Chicago.

Loyola University School of Medicine is planning a highly interesting scientific exhibit, from the departments of that school.

The Illinois Tuberculosis Association has planned an interesting exhibit showing the work which has been done to check the ravages of the Great White Plague. The exhibit will be in charge of the executive Secretary of that Association, Mr. W. P. Shahan, Springfield.

Dr. Vilray P. Blair, of St. Louis, has arranged an interesting exhibit showing the newer methods in plastic surgery. The exhibit consists of interesting charts and illustrations of these procedures, along with wax models to illustrate the interesting points in connection with the work.

Washington University School of Medicine, St. Louis, is planning to have several of their departments represented with interesting scientific exhibits. The details have not yet been announced, but they will be given in the official program.

There will be a considerable number of other interesting scientific exhibits shown, which will add greatly to the value of this type of visual education to the Medical Profession of Illinois.

NOTES ON EXHIBITS

A. S. Aloe Company, 1819 Olive Street, St. Louis, Missouri, will exhibit at the 81st Annual Meeting of the Illinois State Medical Society with a complete line of Chrome Plated Instruments. Of special interest to general practitioners will be the whoeing of the new "Salerni" High Colonic Irrigator and the new Scherck Examining and Irrigating Cystoscope. The Aloe Company, with general office, retail store and factory located just 20 minutes from the convention, extends a cordial invitation to physicians attending this convention to visit their store while in the city. Transportation will be provided to all who apply at the Aloe booth.

De Puy Manufacturing Company, Warsaw, Indiana, invites your attention to Aluminum X-ray Splints, Fracture Bed, Frames and equipment for the Fracture Surgeon.

De Puy has served the profession for thirty-five years and has constantly bent all its effort to perfect fracture appliances to meet the approval of the most critical doctor.

Ask your friends to see the De Puy Equipment at Booth No. 22. Mr. W. D. Bates will be in charge. No high-pressure methods used.

The DeVilbiss Company, Toledo, Ohio, manufacturers of Atomizers and Vaporizers for home and office use, have reserved space No. 50 at the meeting of the Illinois State Medical Society to be held May 5th, 6th and 7th, 1931, in the Shrine Temple, East St. Louis, Illinois.

The DeVilbiss Company has, in the past year, made many improvements in their line of Atomizers. New models have been added which will be of interest to the profession. These will all be shown at the 81st Annual Meeting of the Illinois State Medical Society.

The Dick X-Ray Company of St. Louis will have an excellent display of the well known Keleket X-Ray apparatus. Burdick Ultra Violet Quarts Lights and Burdick Zoalites. The exhibit is attractive and this well known company will welcome their many old friends and all other visitors who call on them.

The General Electric X-Ray Corporation exhibit will consist of the new Model 17-75 Diagnostic X-Ray Unit. This design takes into consideration the average requirements of many practicing physicians and smaller hospitals who desire diagnosis, capable of doing a strictly high quality of work and yet representing a moderate investment.

It is a compact, self-contained X-Ray Unit incorporating an All-Metal Bucky Table, Victor curved Bucky Diaphragm, tube stand, 30 M. A. Radiator Type X-Ray Tube, Patterson Fluoroscopic screen, Vertical Fluoroscope, control stand and transformer.

Strained Vegetables for infant feeding and special diets will be exhibited by Gerber Products Division of the Freemont Canning Company, Freemont, Michigan. These products have gained wide acceptance by the medical profession and the trade during the two and one-half years since being introduced.

Strained, unseasoned, specially prepared, these products are of unusual interest because they offer the physician an opportunity for more perfect control of infant diets and insure uniform, properly prepared feedings.

Visitors at the booth will be given any information wanted concerning the manufacture of the product and will be given an opportunity to register for samples and full detailed information of special interest to the profession.

Have you found how grateful patients are for the

suggestion of Horlick's Malted Milk Tablets as a relief from the sameness of the Liquid Diet?

They have the same nourishing and remarkably digestible qualities as the powder form, possessing all the goodness of full-cream milk, choice wheat and malted barley.

Horlick's the Original Malted Milk, natural and chocolate flavors, both in powder and tablet form, and Horlick's Milk Modifier, a maltose and dextrin product, will be featured at the Horlick booth, No. 31.

The exhibit of the firm of Wm. W. McMaster, Physicians, Surgeons and Hospital Supplies, 126 N. Adams Street, Peoria, Illinois, will be in booth No. 41. This is the third year that this Central Illinois drug and supply house has been represented at the State Convention, and their exhibit will include the showing of a representative line of surgical instruments, blood pressure apparatus, diagnostic and laboratory equipment, electro-therapeutic equipment, physicians bags, standard lines of pharmaceuticals and biologicals of which they are authorized distributors, and pharmaceuticals of their manufacture.

This firm recently suffered a complete loss of their business by fire, but is now located in their new store which has been completely rebuilt and restocked with practically everything which the general practitioner or the specialist may need.

Mead Johnson & Company will have on exhibit its complete line of infant diet materials including Mead's Dextri-Maltose, Mead's Cod Liver Oil, Mead's Viosterol, Mead's Recolac, Mead's Non-Curdling Powdered Protein Milk, Mead's Non-Curdling Powdered Lactic Acid Milk and Mead's Powdered Yeast. Mead's Cereal will be introduced. A Cereal rich in vitamins and mineral will undoubtedly be received with deep interest by physicians.

There will also be for the examination of physicians a complete line of Mead's services such as diets for older children, height and weight charts, etc., all of which are free to members of the medical profession in any quantity desired. Representatives will be on hand to meet their friends and to discuss the application of any of the Mead products to infant feeding problems.

An exchange of ideas and opinions relative to the feeding of infants and in regard to the preparation of nourishment for adults requiring a restricted diet are of much value, particularly in view of the recognized importance of selecting food material best adapted to the individual requirement. The Annual Session of the Illinois State Medical Society affords an opportunity for such discussion and not only in the various sections but in the exhibit hall where representatives of the Mellin's Food Company will await physician's questions and be ready to discuss the subject matter from the maker's viewpoint. Members of the Society are cordially invited to call at Space No. 21.

Full information and illustrated folders of the Scientific Medical Motion Pictures supplied by Petrolagar Laboratories may be obtained at the Petrologar display.

This splendid library of films have achieved international repute and is well known by practitioners throughout the United States and Canada. The complete list now comprises twelve exceptionally instructive subjects.

Presentations before accredited medical groups may be arranged at any place or date, without charge.

At Booth No. 30, The Chas. H. Phillips Chemical Company will display Phillips' Milk of Magnesia, the ideal laxative antacid, and Phillips' Dental Magnesia, the milk of magnesia tooth paste. You are cordially invited to inspect these products and receive samples.

W. B. Saunders Company, Medical Publishers, Philadelphia and London:

These publishers will have accessible for examination a complete list of their books. Outstanding among the newer of these are Andrews' Diseases of the Skin, new edition of Da Costa's Modern Surgery, Da Costa's Papers and Speeches, Curtis' Gynecology, Kaplan's Radiation Therapy, Moorhead's Traumatotherapy, Webster's Legal Medicine and Toxicology, new edition of Cecil's medicine, new edition of Howell's Physiology, new edition of McLester's Nutrition and Diet, new edition of Todd and Sanford's Clinical Diagnosis by Laboratory Methods. In addition undoubtedly those attending the convention will be interested in Evarts Grahams three volume work on Surgical Diagnosis and Blumers three volume work on Bedside Diagnosis, Beckmen's Treatment, Jackson and Coates on the Nose, Throat and Ear, Maximow's Histology, Areys Embryology, and many other standard books on medicine, surgery and the specialties.

Sharp & Smith of 65 East Lake Street, Chicago, Illinois, will have a very interesting exhibit at the 81st Annual Meeting of the Illinois State Medical Society. Physicians and surgeons interested in the latest developments in instruments will find it well worth while to visit the Sharp & Smith exhibit while they are at this meeting. Of particular interest will be the new Intestinal Anastomosis Clamp designed by Fred Rankin, M. D., F. A. C. S., the Hodlick Needle Holder, the Stein-Arens Tubal Patency Set, etc.

The Kellogg Company of Battle Creek, Mich., will exhibit their well known line of preparations, which are used in normal and special diets. Representatives of this company will be present to give any desired information concerning their products, and they will be pleased to hand out Diet Suggestions and Prescribed Diet lists to all who care for them.

Huston Brothers Company, one of the oldest Surgical Instrument houses in the country, will have an interesting exhibit, which will appeal to those in General Practice, as well as those in the various specialties. They will present many new instruments and appliances, and also have a general line of many things the man in practice needs daily.

Tailby-Nason Company, of Cambridge Massachusetts, will have an interesting display, featuring their well known "Nasons Palatable Cod Liver Oil," the kind that tastes better, and yet has the potency to be expected from such a product. Scientific data will be shown to prove the value of their product in the treat-

ment of many conditions seen by the physician in his work. Representatives of this well known company will be in attendance to answer any questions that may be asked concerning their products, and to greet the members and visitors at the meeting.

The United States Fidelity and Guaranty Company will have an exhibit in charge of their St. Louis agency. Their service to physicians will be explained in detail, and their representatives will be glad to show any features of the protection afforded by this company.

V. Mueller & Company of Chicago will have a large exhibit of more than general interest. Many new patterns of surgical instruments have been developed during the past year, and these will be displayed in the exhibit. V. Mueller & Company always deem it a privilege to show their many instruments to physicians who will take the time to look them over and believe that it is decidedly to the advantage of everyone at the meeting to call and see their unusual exhibit.

The Medical Protective Company of Chicago is well known to all physicians of Illinois and adjacent States. Representatives of the company will be present to say "hello" to their many friends, and to give any information desired on their policies to protect against malpractice. You may feel free to call on them for any information desired, and to make their booth your loafing place, any time you want a place to sit down.

The S. M. A. Corporation of Cleveland will exhibit their well known line of products, calling special attention to the applicability of same in infant feeding. This well known company, formerly the Laboratory Products Company, specialize in "Fine Products for the Infant Diet," and they will be pleased to have you call at their booth for information relative to their products.

Correspondence

WORK OF THE EDUCATIONAL COMMITTEE OF THE ILLINOIS STATE MEDICAL SOCIETY IS MUCH APPRECIATED

Daytona Beach, Fla., Feb. 28, 1931.

To the Editor:

The Florida State Medical Association is outlining a state wide movement of medical education, particularly for the laymen.

As executive secretary to our Executive Board, I have been asked to request your co-operation in formulating plans. We understand that Illinois State Medical Association has the best system, and is achieving considerable success in a similar movement.

We would appreciate any of your data that you think valuable, and any ideas that you have used with good effects, or any suggestions that you may be contemplating to use that might be incorporated in a new undertaking such as ours.

Thanking you for your co-operation, I am,

J. RALSTON WELLS, M. D.,
(Executive Secretary, Executive Board).

WE NEED A GREATER GENERAL PRACTITIONER. WE ALSO NEED A CONTINUED STIMULUS TO ENCOURAGE ALL TO WORK TO BRING ABOUT THIS IDEAL CONDITION

Los Angeles, Calif., Feb. 26, 1931.

To the Editor: I watched the ILLINOIS MEDICAL JOURNAL scrupulously. I wish to congratulate the party who wrote the editorial in the January number on Post-Graduate Study. Just why the profession should be so apathetic in Chicago I never could quite understand. At one time Dr. Thomas P. Foley of the Lawndale Branch of the Chicago Medical Society had a paper in the Bulletin on "Do the Leaders Lead and if So Where?" I have been watching the course of affairs in Chicago to see if there are any who attempt constructive work. Dr. Charles B. Reed, Dr. Irving S. Cutter and the editorials in the ILLINOIS MEDICAL JOURNAL are indicating that something is about to happen. I hope that the editorial in the January number will bear fruit.

Why not make an appeal to the profession to contribute a sum sufficient to buy outright the Public Health Institute? Here they demand one hundred dollars to join the Los Angeles County Medical Society and they have built a fine office building and they have two other buildings from which the society derives a revenue.

Conditions here in Los Angeles are perhaps the worst in the U. S. because the *Los Angeles Times* have a sheet in their Sunday Edition that brings in a large revenue in fake advertising and the *Times* uses every means to discredit legitimate medicine while doing all they can to encourage quackery and cults because of the revenue influence from that source while they of course derive nothing from legitimate medicine.

Now in 1912-14 while I was temporary secretary of the Committee on Medical Charity of the Chicago Medical Society I reasoned that the only solution was to give the Dispensary patient the best of service but use them to educate and re-educate and constantly educate the profession.

Osler believed that every doctor ought to post at least one in five years and Rear Admiral Stitts in his Los Angeles address last fall said he thought the old practitioner ought to take a course at least once a year.

Personally I believe that the most essential thing for the profession to do is to encourage post-graduate work. It is a fact that many of the old practitioners have fallen down or in other words failed to keep in step with medical progress. I find that I have to work to keep up and in many respects I find myself rusty on many things I felt proficient in five years ago. However, I feel resentful to go to a post-graduate institution that takes patients who can afford to pay better than I could and treat them free while I am made to pay a big fee to see my patient or some other doctor's patient taken away from them in this way depriving him of an honest living.

Indications are that the five year cost study will bring about an attempt to have the public pay in advance for their health service and those who can not do so to be treated in free institutions. Now why not anticipate this and have the doctor pay a certain amount as membership fee in his medical society and a part of this go towards a fund for his post-graduate tuition. I am inclined to think that if the doctors do not make an effort to encourage post-graduate study that the State will do it later on. Certainly we need a greater general practitioner and we need a continued stimulus to encourage all to work for a higher manhood and womanhood.

I believe Harris' suggestion for a separate society to discuss business and social problems is indicated. Such a society could help to send more men to congress, to legislatures, to city councils, etc. Such a society could take care of malpractice insurance and many other problems. The revenue paid out ought to go entirely for the benefit of the profession. Physicians' fellowship clubs or societies are already in existence in many cities.

At any rate I wish to show my appreciation and offer all the encouragement I may to the party responsible for that editorial.

D. S. HAGER, M. D.
Bennett, 1898.
Rush, 1900.

EITHER THE PROFESSION WILL HAVE TO CONTROL THE CLINICAL WORK OR THE CLINICAL WORK WILL CONTROL THE PROFESSION

Los Angeles, Calif., March 15, 1931.

To the Editor: I watch the ILLINOIS MEDICAL JOURNAL and have noted your social proclivities. Your editorial should mean something considering the general conditions as they are unfolding at the present time; they are near or should be near to the heart of every graduate of medicine.

That medicine is going to make a change in the near future you will readily agree. No doubt the storm is just gathering and will not arrive until after the five year cost is completed but something should be planned now. Your editorial is pointing to a direction. Each year I have seen an attempt being made to push the old practitioner to the rear and the organized medical schools push their recent graduates to the front.

The present idea that a year's internship will make a proficient practitioner of medicine in my opinion must undergo a change. It is true they learn to write case histories and give anesthetics and when they come out they are looking for big operations. Is there any wonder that the cults thrive The older men have their living taken away from them? and find their cases in the "clinics" and then they are even asked to pay a big fee to see someone else treat their cases and gain a big reputation. It is equally true that the young graduate says that the big fellows do not treat him fair. Here in Los Angeles a "Fellowship" club or society was organized by ex-internes and younger men; because they claimed the older men did not treat them fair. In California, Colorado and many other states there is a strong sentiment in favor of some change.

The Public Health Institute in Chicago might be a nucleus for such a change. *Either the profession will have to control the clinical work or the clinical work will control the profession.* The young graduate should serve, say three months, in each of the various specialties before he should even be allowed to serve as interne. The hospitals should be the place to learn surgery. Three months in E. E. N. & T.; three months nervous; three months children, etc. To do this, clinical work must be organized and a center established. Physicians and Surgeons College should be en-

tirely under the control of the profession and entirely financed by them. They do what they did here—assess every member one hundred dollars and build up a fund. I will do it but want a hundred dollars worth of benefit from it. It can be done. By increasing the membership dues and using as much as consistent to support the institution. By bequests and endowments and in many ways the profession could be stimulated to higher ideals for the general practitioners. The general man as well as the special man needs post-graduate interest all the time and should be allowed to support his own institution but he should also be given his money's worth in return.

The cults thrive because they take up new ideas and push them. The old practitioners become apathetic because they are constantly undermined and as they have not got the enormous fees that the post-graduate schools demand the older practitioners just "hobble" along and largely forget what they know.

How did ——— institution in Chicago thrive but at the expense of the general practitioner? Here in Los Angeles there are a number of institutions that ought to be closed. One a State Institution that does not pay taxes and is supposed to be run as a post-graduate school but in reality is run for the benefit of an Eye, Ear, Nose and Throat firm of doctors. The men on the staff work for nothing. The patient pays for the druggist, superintendent and janitor and the office is used as a feeder for the nose and throat specialist firm. Another institution is run for the benefit of a large Methodist church and no one except those with Methodist church affiliation can be on the staff. Another one is run for the Parent-Teachers Association and all these are used to treat the friends of those who have influence. The city too has a large clinic. Now why not organize and use this material for post-graduate instruction?

Keep punching away and perhaps you may be able to enthuse some ideas into the members of the Illinois Chicago Medical Society that may ultimately mean something.

D. S. Hager, M. D.

"A LIE NAILED,"
TWO REPUTABLE PHYSICIANS TESTIFY UNDER OATH

A person who says that his name is William A. McCormick, and who claims to live at Onekama, Michigan, who also claims to be an agent and working for the American Medical Liberty League, whose main office is in New York, and which claims to have branch offices in several places in the United States, and which claims to be working and spreading propaganda against "vivisection"—vaccination to prevent smallpox, and all other "serums." The said William A. McCormick was in Canton, Illinois, on May 28, 1929, and was driven out of town for violation of section seven of the Municipal Code. After being fined and forfeiting an appeal bond, that the said William A. McCormick has and is at the present time sending through the mails, and otherwise distributing yellow slips and pamphlets, with the statements that Miss Dollie M. Parks, a principal of the grammar school, died as a result of vaccination to prevent smallpox. The following from two of the attending physicians, is proof that this is lying propaganda.

STATE OF ILLINOIS } SS.
COUNTY OF FULTON }

W. E. Shallenberger, being first duly sworn on oath, deposes and says that he is a regularly licensed physician in the State of Illinois; that he resides at Canton, Fulton County, Illinois; that he has practiced his profession in the City of Canton for more than 30 years, continuously; that on or about April 25, 1929, there appeared in the City of Canton, Illinois, a man who gave his name as William A. McCormick, and stated that he resides in Onekama, Michigan, and who claims to have an office at 1169 Transportation Building, Chicago, Illinois. He likewise claimed that he was employed by and was agent for the American Medical Liberty League, a corporation, with headquarters in New York City and with a branch office at 1169 Transportation Building, Chicago, Illinois. The said William A. McCormick further claims that he is traveling through different states putting out propaganda and working against vaccination for prevention of smallpox, typhoid fever, diphtheria; also against serums of any kind or description for the prevention or cure of any disease. The said William A. McCormick has made statements and distributed literature at divers times and in different places that Miss Dollie M. Parks, residing at 24 West Pine St., Canton, Illinois, died as a result of an attempted vaccination which was made on or about the first week in February, 1929; that the said vaccinating was done by Dr. W. E. Shallenberger of Canton, Illinois.

I hereby certify that the statements sent out and given out by word of mouth and through the mails as literature by the said William A. McCormick of and concerning the death of Miss Parks are false, vicious, malicious and untrue in every respect.

This affiant further states that he and Dr. E. P. Coleman of Canton, Illinois, were the attending physician and consulting physician with Dr. Harry Durkin of Peoria, Illinois; that the said Dollie M. Parks was vaccinated eight or nine years prior to her death and that she had a typical vaccination scar on her left arm; that an attempt was made to vaccinate her on February, 1929, but said attempted vaccination did not take;

that her arm was not sore; that she lost no work; that she had no discomfort, and that the result was only a small, red pimple which entirely disappeared in a few days.

This affiant further testifies that in his opinion Miss Dollie M. Parks died as a result of right lobar pneumonia; that she was taken sick March 27, 1929, and died one week following, April 3, 1929.

This affiant further certifies that the attempted vaccination and the vaccination which Dollie M. Parks had undergone eight years prior to her death had nothing whatever to do with her death.

Dated at Canton, Illinois, this 9th day of December, A. D. 1930.

W. E. SHALLENBERGER.

Subscribed and sworn to before me this 9th day of December, A. D. 1930.

MINNIE M. SHELTON,
Notary Public.

My commission expires February 26, 1934.

STATE OF ILLINOIS } SS.
COUNTY OF FULTON }

E. P. Coleman of the City of Canton, Fulton County, Illinois, being first duly sworn on oath, deposes and says that he is a regularly licensed practicing physician and surgeon in the State of Illinois; that he has practiced his profession in the State of Illinois, continuously, for more than ten years; that he has read and is familiar with the contents of the affidavit made and subscribed by Dr. W. E. Shallenberger of and concerning the death of Dollie M. Parks, residing at the time of her death at 24 West Pine Street, in the City of Canton, Illinois; that the said affidavit of W. E. Shallenberger is true and correct so far as it concerns and relates to the death of the said Dollie M. Parks; that the cause of the death of the said Dollie M. Parks in the opinion of this affiant was lobar pneumonia; and that neither the vaccination of said Dollie M. Parks, seven or eight years before her death, nor the attempted vaccination in February, 1929, contributed in any way to her death.

E. P. COLEMAN, M. D.,
Counsellor 4th Dist.

Subscribed and sworn to before me this 9th day of December, A. D. 1930.

MINNIE M. SHELTON,
Notary Public.

My commission expires February 26, 1934.

ENLIGHTENED SOCIAL SERVICE CAN DO MUCH TO MAKE A HOSPITAL A PLACE OF HOSPITALITY

THE HOSPITAL AND THE PATIENT

Social service is an important feature of the modern hospital. Patients may need something more than patience in the sometimes slow operations of the laws of the natural and physical sciences under the guidance of an enlightened physician or a talented surgeon. In an address before the American Association of Hospital Social Workers, a sympathetic critic* recently pointed out that amid the medical revolutions of the past centuries with their increasing mass of scientific knowledge the traditional meaning of the word hospital has been largely forgotten. It meant a place of hospitality for those in need of shelter and maintenance, and it was called a "hospital" because those sheltered there were considered, in the Latin, to be *hospes,* or guests. The spirit that makes a patient a guest and the hospital his host should be deeply inculcated. The patient is not merely a "scientific phenomenon" that demands time-consuming attention from a physician, but also a social being. Enlightened social service can do much to "make a hospital a place of hospitality; to insist upon the point of view that the ill human being in hospital is a guest, and not merely a patient."—*Jour. A. M. A.,* March 7, 1931.

*Moe, H. A.: What Social Service Means to the Patient, Hosp. Social Service 22:470, 1930.

ANOTHER ANTI-VIVISECTION BILL AT SPRINGFIELD

The attention of the Illinois Society for the Protection of Medical Research has been attracted by House Bill 453, which was introduced by Representative Bederman (by request) and which has been referred to the Judiciary Committee for consideration.

This bill is an anti-vivisection bill, or an anti-animal experimentation bill.

In 1929 an anti-vivisection bill (Senate Bill 221) was introduced into the Senate of the State of Illinois. The evidence presented against the bill in a committee hearing was so strong that the Antivivisection Society withdrew the bill. A newspaper article quoted their Society as saying that "it is evident that the Illinois Antivivisection Society has failed to convince members of the Senate Public Health Committee that vivisection is what this Society charges, a useless, cruel, and archaic practice," and that "we believe, however, that testimony before Senator Mills' committee conclusively proved that nothing of value has been learned from experiments on dogs."

This change in tactics is that which has been followed by National Antivivisection Societies. Some years ago they introduced a bill into Congress to abolish all animal experimentation. The bill was defeated. They then introduced another "dog bill," and it was defeated. Another "dog bill" was then introduced and it was not reported out of the United States Senate Committee. Obviously such tactics mean "bread and butter" for their paid secretaries and attorneys, but works a hardship on those who oppose such bills who have no paid secretaries and who are opposing the bill in order to protect the public from the deleterious effect that would eventually result.

Before the United States Senate Committee one of their witnesses virtually granted that the "dog bill" was simply an opening wedge to abolish all animal experimentation. They obviously select the dog in this instance because they can make a stronger appeal to sentiment and the emotions.

Much of value has been learned from experiments on dogs. A subcommittee of the Senate Public Health Committee in 1929 visited the laboratories of one of

our State Medical Schools, the laboratories of which are always open, and learned first hand that facts of definite and great value have been and are being learned from experiments on dogs and that the dogs are well treated and cared for. The discovery of insulin, which will benefit the lives of one million people living in the United States today was made solely by experiments of dogs. Death from parathyroid tetany no longer occurs, because of experiments performed on dogs. Pernicious anemia can now be controlled as a result of experiments on dogs. The discovery of ethylene anesthesia was made possible in great part through the study of dogs. "Worm medicines" of great value in man have been discovered by experiments on dogs. The causal conditions related to certain anemias, stomach ulcer, dropsy, nervous diseases, heart diseases, liver diseases, etc., have been elucidated through experiments on dogs. Dogs are used extensively in testing drugs before they are given to man because they react so much like the human being. Many other facts of this nature have been discovered which are gradually leading mankind to unravel the mysteries of life and disease. If dogs were useless, why would eminent scientists use them? If their use for experimental purposes were unnecessary, they would use a smaller animal that is less expensive to keep.

It should be pointed out that all dogs used for purposes of experimentation are unclaimed, stray dogs obtained from the Pound that would otherwise be put to death. We kill them humanely, but in doing so learn something that is worth while to humanity at large. No uncontroverted evidence of cruelty and no proof of cruelty is on record as occurring in the recognized laboratories of the State of Illinois. All claims to the contrary are based on incomplete knowledge and too frequently on the misrepresentation of the facts.

It should be pointed out further that adequate laws concerning cruelty to animals exist in the State of Illinois and that the laboratories for animal experimentation throughout the nation have voluntarily adopted a list of "Rules Governing the Care and Treatment of Animals."

We feel confident that the Representatives of the State of Illinois will not be misled by such propaganda, and will deal with all Antivivisection Bills according to the precedent established by the Senate of the United States and of the State of Illinois.

Do not neglect to write your representatives and protest against the passage of Bill 453.

The following is the personnel of the Judiciary Committee of the House:

Adamowski, Benjamin S.
2625 Logan Blvd., Chicago.
Bederman, Edwin B.
5010 N. Drake Ave., Chicago.
Blackwell, George W.
21 E. 28th St., Chicago.
Borders, Grover C.
East St. Louis.
Branson, R. J.
Centralia.
Bratton, Luther B.
Kankakee.
Burns, James T.
Kankakee.
Carroll, Wm. M.
Woodstock.
Church, Ralph E.
300 Church St., Evanston.
Collins, Dennis J.
DeKalb.
Devine, John P.
Dixon.
Doyle, Howard L.
Decatur.
Durso, Michael R.
1012 Milton Ave., Chicago.
Edwards, W. O.
Danville.
Foster, Frank E.
15633 Lexington Ave., Harvey.
Gaines, Harris B.
3262 Vernon Ave., Chicago.
Galvin, A. O.
970 Milwaukee Ave., Chicago.
Garriott, John C., Jr.
8101 Harper Ave., Chicago.
Giffin, D. Logan
Springfield.
Gilmore, Wm. E.
Champaign.
Green, Leroy M.
Rockford.
Hennebry, Michael F.
Wilmington.
Ioge, Michael L.
5434 Cornell Ave., Chicago.
Jenkins, Charles J.
4127 Prairie Ave., Chicago.
Kane, Charles P.
Bloomington.
King, Wm. E.
4046 S. Parkway, Chicago.
Lager, A. B.
Carlyle.
Lawler, Wm. J.
Springfield.
Lewis, F. W.
Robinson.
Libonati, Roland V.
925 S. Halsted St., Chicago.
Little, Roger F.
Champaign.
McCarthy, Frank A.
Elgin.
McCaskrin, Harry M.
Rock Island.
McSweeney, John R.
3953 Jackson Blvd., Chicago.
Nyman, Carl O.
Rockford.
O'Grady, Thomas J.
851 W. 53rd Pl., Chicago.
O'Neill, Schaefer
Alton.
Peffers, John M.
Aurora.
Rennick, Frederick W.
Buda.
Roderick, Solomon P.
3104 Douglas Blvd., Chicago.
Roe, Arthur
Vandalia.
Schanckenberg, Elmer J.
6936 Euclid Ave., Chicago.
Searle, Clinton
Rock Island.
Sinnett, Thomas P.
Rock Island.
Snell, Truman A.
Carlinville.
Sullivan, Mason S.
2046 Mohawk St., Chicago.
Sullivan, T. J.
Springfield.
Swanson, David I.
7842 S. Marshfield Ave., Chicago.
Teel, H. V.
Rushville.
Thompson, Frank G.
Mt. Vernon.
Thon, William G.
2210 Cortez St., Chicago.
Walker, John L.
Joliet.
Wilson, Alexander.
Cairo.
Wilson, Elmer C.
Kankakee.
Woodward, Robert M.
61 E. Goethe St., Chicago.
Worth, Evan
Lincoln.

A. C. Ivy, M. D., Secretary,
Illinois Society for the Protection of
Medical Research.

TRAIN SCHEDULE TO EAST ST. LOUIS

C. & E. I.—Dearborn Station, Chicago.

Central Standard Time

Leave Chicago	Arrive Washington Avenue, St. Louis
11:40 A. M.	5:59 P. M.
3:30 P. M.	9:49 P. M.
11:55 P. M.	7:10 A. M.

Wabash R. R.—Dearborn Station, Chicago.

Leave Chicago	Arrive St. Louis
11:30 A. M.	6:00 P. M.
3:15 P. M.	9:55 P. M.
12:05 A. M.	7:41 A. M.

Chicago & Alton R. R.—Union Station, Chicago.

Leave Chicago	Arrive St. Louis
11:30 A. M.	6:00 P. M.
3:00 P. M.	9:30 P. M.
6:50 P. M.	1:20 A. M.
11:30 P. M.	6:55 A. M.
11:59 P. M.	7:43 A. M.

Illinois Central R. R.—Central Station, 135 E. 11th Pl.

Leave Chicago	Arrive St. Louis
11:45 A. M.	6:15 P. M.
4:00 P. M.	10:30 P. M.
11:55 P. M.	7:28 A. M.

Original Articles

UNDULANT FEVER*

LLOYD ARNOLD, M. D.

Department of Bacteriology and Preventive Medicine, University of Illinois College of Medicine, and Illinois State Department of Public Health

CHICAGO

Undulant fever in man is caused by bacterium producing infectious abortion in goats, cows and pigs. Infectious abortion in these domestic animals is a disease of the fetus. The developing fetus becomes infected with the bacillus abortus. The death of the fetus and the evacuation of the uterus follows. The female is the carrier of the bacillus abortus, she does not seem to be damaged as a result of this chronic carrier state. The bacteria are present, at least at times, in the milk of such animals. The disease is one of the fetal stage of the unborn animal.

Man can become infected with the bacillus causing infectious abortion in our domestic animals. The goat strains have been long known to cause a characteristic chronic undulated fever, known best as Malta fever. It is now known that cow and pig strains of the infectious abortion bacillus can cause undulant fever in man.

Undulant fever outside of the Mediterranean basin in south Europe is assumed to be due to the cow strain of the bacillus of infectious abortion. The swine or pig strain has been implicated in some of the human cases in this country. Thompson[1] Harrison and Wilson[2] Manson-Bohr[3] can be consulted as to the distribution of this disease in the British Isles. Cesari[4] and Ledoux, et al.,[5] give the distribution in France. Kristensen[6], Madsen[7] and Sjoerolev[8] in Denmark. Kling[9] reviews the situation in Sweden. Gabli[10] has 30 pages of references covering undulant fever in Italy. Van der Hoeden[11] has reviewed the human undulant fever occurring in Holland. It can be seen from these references that undulant fever is spread over a wide geographical area.

Port of Entry of Causative Agent. In the state of our knowledge at the present time, we can consider two ports of entry of the bacillus abortus into man; namely the alimentary tract and the skin. The B. abortus is eliminated from the infected cow in the milk. The drinking of raw and unpasteurized milk containing this microorganism has been responsible for many cases of undulant fever. Children drink more milk than the adult age groups of our population, but the incidence of undulant fever among children is less than any other age group. Graph 1 shows the relative distribution by age groups of 704 recorded cases of undulant fever in the United States. It is apparent from this graph that the highest incidence of the disease is between 20th and 50 years of life. Graph 2 shows the distribution of these 704 cases by sex. Practically three males are infected to one female. These figures would not support a milk-borne origin of the causative agent of undulant fever. This would not exclude milk as a possible vehicle, but in the absence of other evidence, it would be extremely unlikely to be a milk borne infection. Hardy[12] has analyzed 222 cases of undulant fever in Iowa and has again called our attention to what most of us have observed, namely, that undulant fever in this country is a rural disease. Hardy has shown that the case rate per 100,000 population in urban (Iowa) was 4; in towns less than 5,000 population 8.3 cases; in rural communities 11.4 cases per 100,000 population. There were in his series three times as many cases per unit population in the country as compared to the cities, the small towns ranging between the two. Hardy, Hudson and Jordan[13] have shown that the skin of guinea pigs is a better port of entry for pig and cow strains of B. abortus than the alimentary tract. There was no local inflammatory reaction at the point of entry of these bacteria in his experiments. Hardy suggests the skin as an important port of entry in animals and states that the ingestion of the B. abortus does not satisfactorily explain the epidemiology in domestic animals infected with B. abortus. Rimpau and Steinert[14] investigated a limited number of cases, one-half they supposed due to contact, one-fourth due to drinking raw milk, and one-fourth unexplainable either by contact or milk drinking.

The goat strain of the infectious abortion bacillus is not so important to us in the middle western states as the bovine and porcine strains of the animal disease. The various investigators have not fully agreed upon the means of differen-

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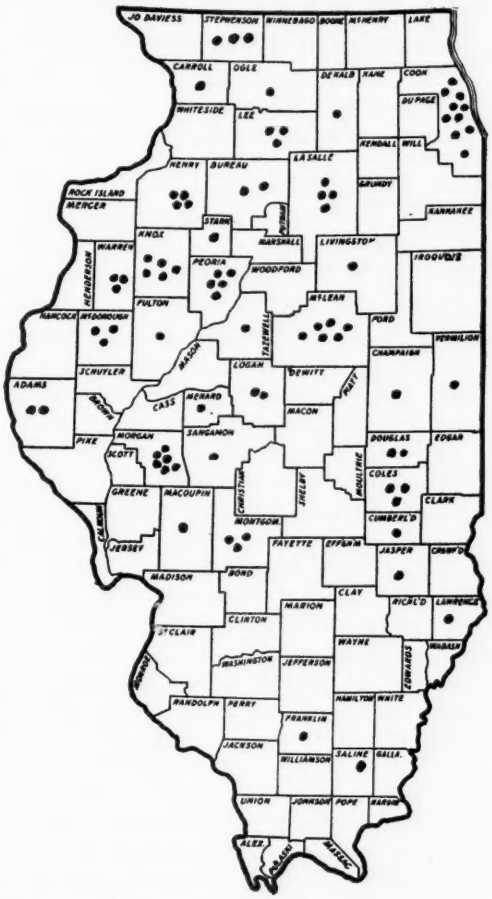
tiating the cow from the swine strain. The use of the guinea pig has been advocated by Theobald Smith, while Alice Evans is satisfied with results obtained by absorption of the agglutinins. Other workers suggest differences in cultural characteristics as ways of differentiating between these two strains. Most of our experimental evidence, as well as human experience, leads us to believe the swine or porcine strains of the infectious abortion bacillus to be more pathogenic than the bovine strains.

Onset. The cases can be roughly divided into groups according to severity of the initial symptoms. A sudden onset characterized by rigors, chills with profuse sweating, muscular and joint pains, loss of weight and a characteristic continued persistent and undulating fever curve. A more gradual and insidious onset is the other type encountered. The patient feels tired during the afternoon, with headache, backache, pains in muscles, joints and extremities; a loss of appetite, digestive distress and usually constipation. Patients feel feverish or hot in afternoon, preceeded by sensation of chilliness. The mental state changes to one of extreme irritability, mentally depressed and anxious of a serious impending illness. The profuse and drenching sweating is one of the most outstanding abnormal symptoms.

Undulant fever is confused with typhoid fever, malaria, tuberculosis and influenza, added to these, rheumatic fever and subacute bacterial endocarditis (streptococcus viridans).

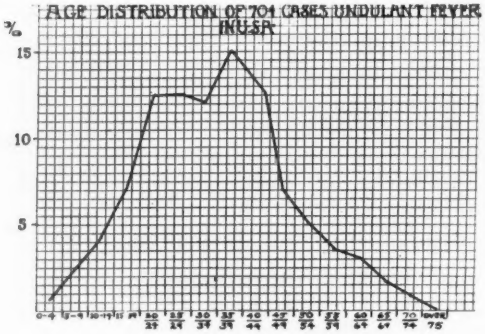
Diagnosis. The clinical picture is one of septicemia and generalized infection. The undulating characteristic fever curve, the rigors, chills and sweating cannot but point toward such a clinical picture. The blood serum should be tested for agglutinins of B. abortus origin. This is the same as the Widal test, except the B. abortus is used instead of the B. typhosus for the test. If the serum is diluted over 1 to 80 with normal salt solution and still agglutinates the B. abortus the reaction is considered diagnostic along with the clinical picture of the disease. In dilutions less than 1 to 40, the test is not diagnostic. There are a few cases of undulant fever on record in which the agglutination test was negative. The B. abortus can be cultivated from the blood during the acute febrile stages of the disease. The B. abortus can be grown from the urine during acute febrile stages, but the urine does not yield as large a percentage of positive cultures as the blood. Ten c. c. of blood should be drawn under sterile precautions, the same as is done for the Kahn test, and sent to the laboratory with a request for undulant fever diagnosis by the cultural and agglutination reactions. The agglutination reaction usually appears after the third week of the illness. The B. abortus may be grown from blood specimen before this time. To these two diagnostic procedures, should be added the skin test. Giordano[15] has found this test of value. Suspensions of B. abortus killed by heat were injected intradermally (0.05 to 0.2 c. c.) and in patients with undulant fever there was an area of hyperemia developing in 12 to 48 hours after in-



Spot map of State of Illinois showing distribution of undulant fever cases from January, 1926, to May, 1930. Each dot represents a reported case.

jection. This test was negative when performed upon normal subjects.

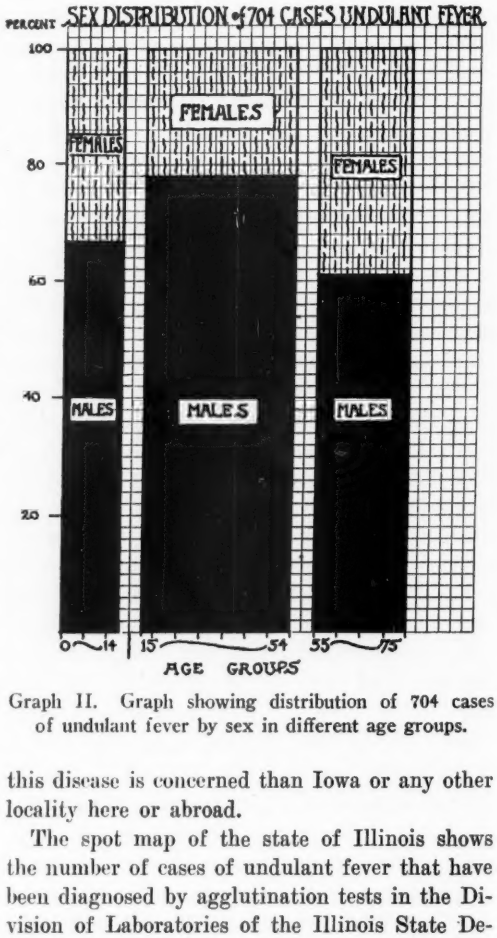
To recapitulate, one could suggest that typhoid be eliminated by Widal and stool cultures, malaria by microscopic examination of the blood for plasmodia, early tuberculosis by physical and roentgenographic studies, and then the possibility of undulant fever should be considered. Blood should be sent to the laboratory for culture and agglutination. As in any other agglutination test, one specimen if negative is not of great value. It is best to submit at least three blood specimens if in doubt as to the diagnosis.



Graph I. Graph showing in percent the distribution of undulant fever in the United States by ages.

Treatment. The treatment is purely symptomatic. No specific method of treatment is known as present. Keep patient in bed during the febrile stage of the disease. Sedatives should be given for insomnia, headaches and other distressing symptoms. Convalescence is often long and tedious. Abundant nourishing diet is the most important part of the treatment. There is a loss of 20 to 40 pounds of weight during the febrile stage. The increased oxydation of the body, accompanying the fever process, with the loss of appetite, leads to a rapid diminution in weight. This should be offset as soon as possible by diet. Psychic encouragement is also important. The mortality rate for undulant fever is low, 2 to 3 cases per hundred have a fatal outcome. Chemotherapy (mercurochrome) has not proved to be effective in the majority of cases. Foreign-protein therapy has been tried, but little improvement has been noted. Specific vaccine therapy has its adherents, but it is difficult to understand how the injection of a heat killed bacteria would benefit a patient suffering from a septicemia caused by the same living bacteria.

Prevention would be the method of choice. Inasmuch as the Bacillus abortus is present in the milk of cows barboring this bacterium, the pasteurization of such milk should be carried out before it is offered for human consumption. The skin may be the port of entry in some cases. Proper precautions in handling aborting animals and the dead fetus and other discharges should be carried out by people in contact with such material. It is possible that certain states or even small localities may have particular problems in transmission peculiar to that environment. Illinois may have a different undulant fever question in so far as the epidemiology of this disease is concerned than Iowa or any other locality here or abroad.



Graph II. Graph showing distribution of 704 cases of undulant fever by sex in different age groups.

The spot map of the state of Illinois shows the number of cases of undulant fever that have been diagnosed by agglutination tests in the Division of Laboratories of the Illinois State Department of Public Health from January, 1926, up to May, 1930. One question we wish to bring

to your attention is, "Does this represent the distribution of undulant fever in this state?" It will be noted that there is a tendency for several cases to appear in a county that shows the presence of the disease. In other words when a case is once recognized, there is a tendency to find more cases in the same community.

There are probably many more cases of undulant fever in Illinois than have been reported. The disease has the highest incidence in the rural communities. The State Department of Public Health is desirous of offering what aid it can in ascertaining the extent of undulant fever in Illinois. If blood can be sent to the State Department of Public Health for bacteriological and serological examination in cases of continued and undulating fevers of unknown origin, we feel confident that aid will be rendered the physicians in rural communities in arriving at a diagnosis in many of these cases.

DISCUSSION

Dr. T. G. Hull, Chicago: Recently some of my friends have come to me and asked what this "indolent fever" was, anyway. Undulant fever at the present time is going through about the same stage of development that bovine tuberculosis went through twenty-five years ago. There is the question of whether it is infective for man, and to what degree. The problem is important as a study in research because we do not know much about it. Some have asked if there are only thirty or fifty cases in a certain area over a period of years, why worry about it? That is what we are worrying about. We do not know whether we have discovered all the cases, or how they became infected. Probably unless we do put special emphasis on the subject we will not have any cases reported. They will be called typhoid and tuberculosis instead of undulant fever. Two things have come to my attention concerning the disease. On this map, the cases in Illinois were not in the orchard country, in the south, nor in the dairy section of the north, but in the hog-raising section of the corn belt. Hogs have been the subject of our study because the hog carries an organism which may be communicated to man. How does the contact come? We do not know. Possibly the hog infects the cow and thus this organism is transmitted to the milk. Another factor has been brought to our attention recently. Chickens become infected in the ovaries; the eggs may be infected. However, an infected fowl soon ceases to lay eggs. Undulant fever is a rural problem. We have a few cases in the large cities, but they are usually due to sources outside the city. These conditions are true of Chicago, Detroit and New York. In New York they had several cases over a period of years, all of which were imported. One case developed within the city; the patient was a milk taster in a pasteurizing plant, where he tasted samples of raw milk.

Dr. R. O. Stites, Industry: It seems that undulant fever is common. I might cite three cases in one family. I was called to see a patient, whom I thought had a toxic angina. In a few days her severe symptoms disappeared and I was able to obtain the history, which was that early in July she became fatigued and irritable. She began to notice a fever, consulted a physician and was advised to have her tonsils removed. In August she took a vacation and felt better for a time, but when she came home again the symptoms recurred. She noticed that her afternoon temperature was 101 to 102. She felt fairly well in the morning but by noon was tired out. Her acute symptoms suggested a gall bladder infection with angina manifestation; a blood examination showed agglutination in 1 to 400. She had sweats and a cough and an obstinate constipation. The six-year-old son had a cough and high fever. Another son was brought into the office with abdominal pain of such a severe nature as to require morphine. Careful watching ruled out appendicitis, kidney infections, etc. In the course of a few days the pain subsided but a cough developed. None of these cases had enlarged spleen. All had cough, constipation, nervousness, fever and loss of weight. All showed agglutination in 1-400. A cow which was apparently healthy was the source.

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SPLINTING THE LUNG*

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Constitutional and local rest in any disease process may and should rightfully be considered as a panacea. Who, for example, would treat a decompensating heart without putting the patient to bed? Who would allow a patient with pneumonia to be walking the streets? What surgeon would fail to apply a splint or a cast to a fracture? Yet, there are tuberculous individuals walking the streets not, we hope, because of ill advice; but because of the common insidious course of this disease. The treatment of pulmonary tuberculosis is constitutional and local rest.

We shall confine ourselves to the discussion of local rest in the various diseases of the lungs particularly that of tuberculous lesions; i. e., spontaneous pneumothorax, pulmonary hemorrhage, pleurisy with effusion; and also that of pulmonary abscess and bronchiectasis.

Local rest is accomplished by various methods; by lying on the diseased side, by various appliances to the chest; artificial pneumothorax, phrenicoexeresis, and by thoracoplasty. Nature too attempts to produce local rest even if it does accomplish it with what appears to us, without judgment, as is true in many cases of spontaneous pneumothorax. The heart is often pulled over to the most diseased side; the spinal column assumes scoliotic curvatures thus splinting the lung from within and from without respectively. Pleurisy with effusion also is nature's method in producing local rest.

Artificial pneumothorax is a simple procedure; however, not without danger. This method of treatment in patients with unilateral involvement is the choice; because of its simplicity and because it can be discontinued with impunity and the collapsed lung allowed to expand. The immediate danger associated with this operation is air embolism which produces at first symptoms of vertigo, spots before the eyes, convulsive movements, loss of consciousness and sometimes death. In order to prevent such accidents the patient is placed in the Trendelenburg's position and a free oscillation of the manometric fluid obtained before insufflation of air is started. It is also wise to remember that the patient is the vital manometer. Insufflations should be discontinued at once when the patient complains of tightness or pain in the chest regardless of the manometric reading. Active treatment of air embolism, as we have employed it, is a hypodermic of morphine sulphate gr. ¼; atropine sulphate gr. 1/150; and 15 minims of

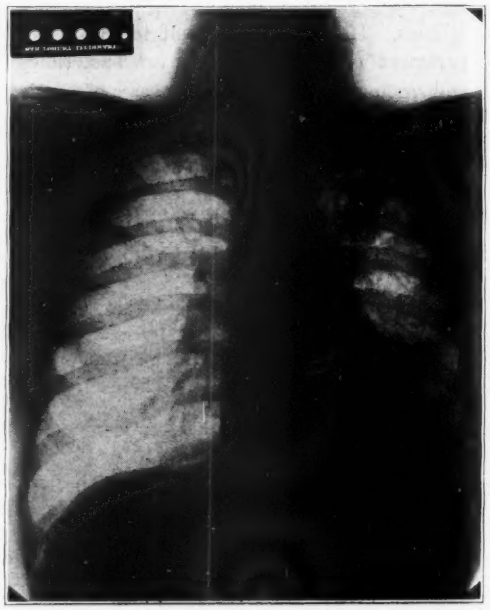

Plate 1a. Pathology of left upper lobe with no apparent pathology of the right lung.

1:1000 solution of adrenaline. The proper management of successful cases of artificial pneumothorax consists in frequent insufflations with repeated observation under the fluoroscope for possible marked mediastinal and diaphragmatic displacement in which experience teaches us that most often we find negative manometric readings regardless of the amount of air injected. Air should be insufflated often, at first ending always with a slightly positive pressure, unless the patient complains of marked discomfort (Plate No. 1). When there is a displacement of the mediastinum and the diaphragm, the interval of insufflations should be temporarily discontinued (Plate No. 2).

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Notwithstanding the fairly large number of gratifying improvements attributed to artificial pneumothorax, certain complications such as sero and pyo-pneumothorax follow (Plate No. 3). Slight pre-existing involvement of the contralateral lung becomes at times aggravated; and sometimes as we have observed in one patient a miliary tuberculosis complicated the contralateral lung which at previous times was free from involvement as found by repeated physical examinations and roentgenogram studies (Plate No. 4). Lung compression should at once be discontinued when the contralateral lung becomes retrogressive and the policy of "watchful waiting" instituted. Unfortunately, some patients with unilateral involvement have no free pleural space and consequently must have the diseased lung compressed by other methods.

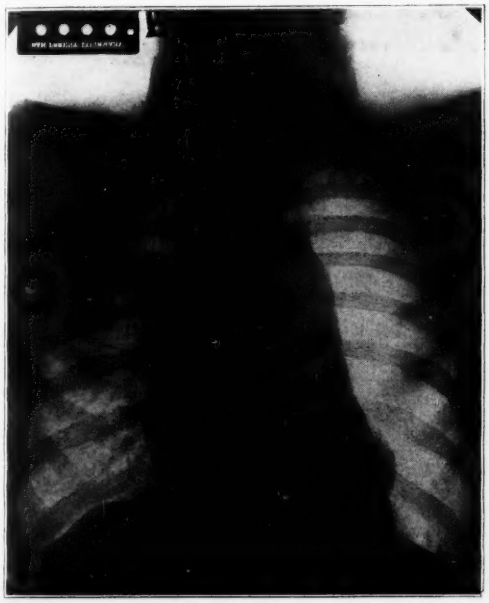

Plate 1b. Complete collapse of the entire left lung with complete abatement of symptoms. The patient is working every day.

This introduces the discussion of other surgical procedures of splinting the lung, which through the work of Dr. Jerome Head was made possible at our Institution.

Phrenicoexeresis as the name indicates is the evulsion of one or the other phrenic nerves which are the principle motor nerves to the diaphragm. This operation which is comparatively simple and is done under local anesthesia paralyzes the diaphragm with a consequent ascension into the thoracic cage. Phrenicoexeresis is particularly indicated in basilar pathology and is usually resorted to as a preliminary procedure to an extrapleural thoracoplasty.

Thoracoplasty, like phrenicoexeresis, should be undertaken only after a careful study of the general condition of the patient, the temperature, pulse, and the condition of the contralateral lung. The intangible factor of resistance of the patient should be passed on by an experienced internist. We should like to say right here that it is upon sound judgment on the part of the internist and the surgeon that success of thoracoplasty lies; and the prudent selection of patients for such operation constitutes the real difficulty of extrapleural thoracoplasty. This form of pulmonary compression, which consists of removing portions of the first to the eleventh ribs of varying length beginning as close to the spinous processes as is possible, is permanent and cannot be undone as in artificial pneumothorax.

Plate 2. Marked displacement of the mediastinum and diaphragm. Activity is present in the left lung.

Spontaneous pneumothorax,[1] a common complication in tuberculosis, is of interest because of

1. Gray, Ethan A.: Spontaneous Pneumothorax. J. A. M. A., April 23, 1921. Vol. 76, pp. 1147-1150.

its resemblance to artificial pneumothorax in splinting the lung; yet, to its vast difference in the ultimate prognosis. In order to understand this difference it would be well to call attention to the fact that the collapse of the lung in spontaneous pneumothorax unlike that of artificial pneumothorax occurs as a result of rupture of the lung and thus the air inspired into the lung enters into the pleural space. The act of inspiration being active and the act of expiration being

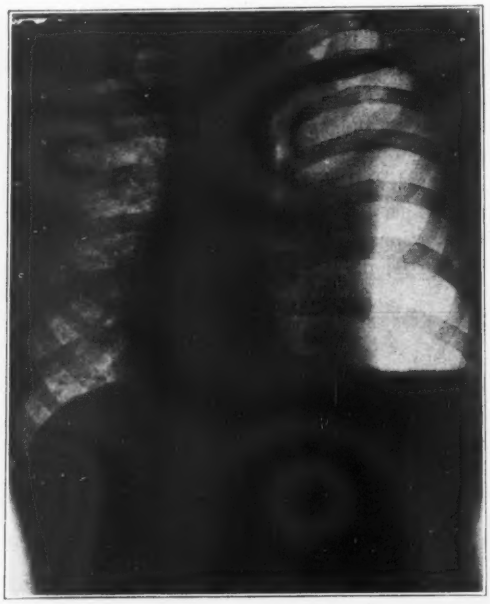

Plate 3. Shows a case of sero-pneumothorax as indicated by fluid level. Adhesions are present at apex.

passive makes the flow of air into the pleuritic space one way and continuous with every inspiration and thus the lung collapses rapidly much unlike that of the artificial method of compression. Spontaneous pneumothorax may, but rarely does, occur in patients with strictly unilateral involvement; and consequently, with the rapid collapse as takes place, the pathology in the opposite lung due to its compensatory effort becomes aggravated and ultimately causes death. Pyo-pneumothorax, a much dreaded complication, results finally, and at a varying interval, a pyo-pneumothorax vomica or necessitatis develops.

The treatment of spontaneous pneumothorax consists in repeatedly aspirating the air by means of a water filled bottle with a nozzle at the bottom of the flask from which the water is allowed to run. As the water leaves the bottle, a vacuum is produced above the level of the water which in turn is filled with air sucked in from the pleural

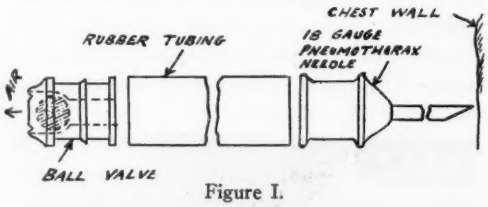

Figure I.

space. Another method is the continuous method of aspiration which is accomplished by inserting a needle into the pleural space, like in the above procedure, and attaching a rubber tube to the needle and immersing the other end of the tube in a pan of water. Still another method of continuously aspirating air is one which the authors devised (Fig. 1). During inspiration the valve closes not allowing air to be sucked in through

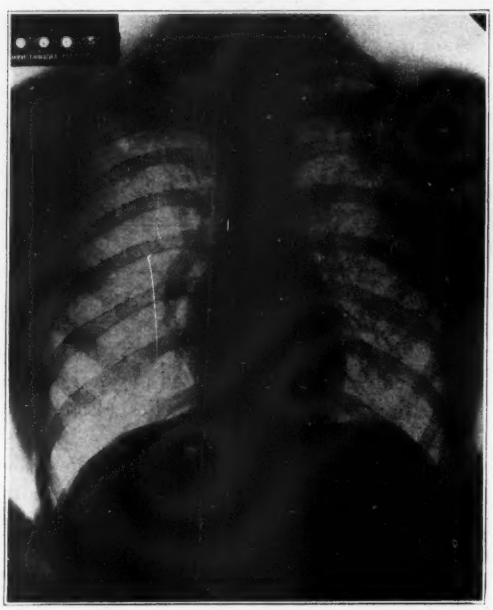

Plate 4a. Before artificial pneumothorax, showing pathology in left apex.

the lumen of the needle, and when the patient expires the ball valve opens allowing the air to leave the chest cavity. Air is to be aspirated by any one of the methods mentioned until the patient accustomes himself to the collapse produced; and then if the contralateral lung per-

mits, maintain the collapse by artificial means. In the event that a pyo-pneumothorax follows, hychlorite irrigations should be instituted and be repeated at two hour intervals through the day. These irrigations must be done with the closed method, i. e., not allowing air to enter the pleuritic cavity. This should be continued until the patient becomes temperature free or nearly so and the general condition improved. In cases of recent standing, it is possible to obliterate the space by allowing the lung to expand. In cases of long standing, it is necessary finally to obliterate the space by a thoracoplasty. Some patients, strange to say, do apparently well without surgical intervention and remain afebrile for a period of years with a chest full of pus which may be accounted for to the thickened pleura so often present; and thus, slight if any, absorption occurs into the general system. These patients, nevertheless, finally develop a bronchial fistula and succumb.

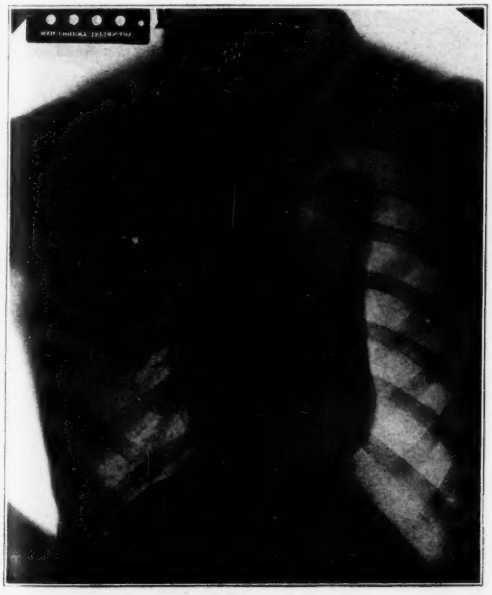

Plate 4b. After artificial pneumothorax, with marked improvement. Ambulatory and working.

Pulmonary hemorrhage is controlled in a large percentage of individuals in whom a good compression is obtained by air. The air in the pleural space which should be given in comparative large amounts is the tourniquet, so to speak, of the bleeding vessels of the lung. It is essential, however, to determine unquestionably which is the bleeding lung and the condition of the non-bleeding lung before collapse is attempted. Insufflations may be continued if the opposite lung permits. If a free pleural space is not to be found, phrenicoexeresis may be tried.

Pleurisy with effusion, a common condition encountered in the tuberculous, is nature's method of splinting the lung. The treatment of this condition is one of "watchful waiting." Aspiration may be resorted to in the event that the patient is dyspneic. Under no circumstances should a rib resection be done. If the contralateral lung permits, fluid may be aspirated and be replaced by air thus converting the condition to a sero-pneumothorax and subsequently be treated with air insufflations.

Plate 4c. Miliary tuberculosis of the contralateral lung. Marked dyspnea, fever and loss of weight. Hospitalized again.

Pulmonary abscess usually affecting the lower lobes of the lungs particularly the right would theoretically yield to phrenicotomy; but unfortunately we have not any experience with this method. A lung abscess that has no exit to a bronchus or is multilocular and only partially drains into a bronchus should not be subjected to a pneumothorax, phrenicotomy, or thoracoplasty; but should be treated more conservatively by postural drainage and if the sputum reveals

many fusiform and spirilla organisms, a course of neosalvarsan should be given as an adjunctive treatment. In cases where the pulmonary abscess is superficial, and not draining into a bronchus and is walled off by pleuritic adhesions from the pleuritic cavity, surgical drainage by means of an open operation and rubber tube is

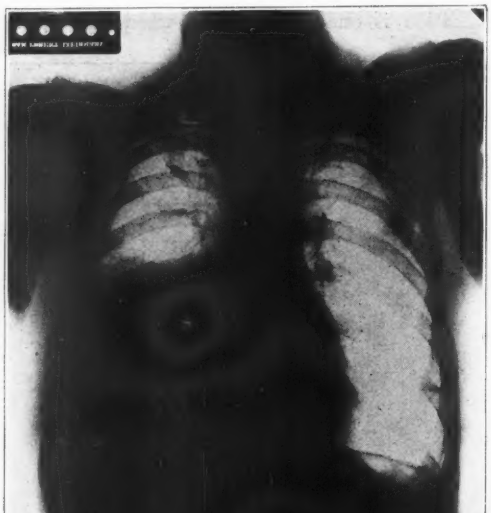

Plate 5a. Shows a pulmonary abscess of right base before artificial pneumothorax was instituted. 1,000 c.c. of three layered fetid sputum in 24 hours.

indicated. In our experience with artificial pneumothorax in pulmonary abscess (Plate No. 5), we have learned that patients with emphysematous chests, and those with bronchial asthma do not do well. Cases in which an incomplete collapse can only be obtained, likewise do not do well.

Bronchiectasis, a malady characterized clinically by a chronic paroxysmal morning cough and expectoration, and pathologically by an abnormal dilatation of the bronchi and bronchioles, usually affects the bases of both lungs and at times the upper lobes. Bronchiectasis of the upper lobe requires no treatment because drainage is constant and accomplished by gravitation; however, bronchiectasis of the lower lobes should be treated by postural drainage. If one or the other side shows greater involvement, artificial pneumothorax or phrenicotomy may be tried.

SUMMARY

1. Artificial pneumothorax should be first attempted before any other surgical method of collapse is resorted to.

2. Frequent fluoroscopic examinations are essential in all patients receiving air insufflations.

3. Particular and repeated vigilance should be given to the contralateral lung in all methods employed in splinting the diseased lung.

4. In our series of 106 patients in whom artificial pneumothorax was attempted 4 or 3.77% of the patients developed symptoms of air embolism. All of these patients had no satisfactory free pleural space.

5. Artificial pneumothorax should be continued at least from two years to five years unless intervening complications should contra-indicate further insufflations.

6. In a series of 78 lung compressions for pulmonary tuberculosis, 54 were classed as good

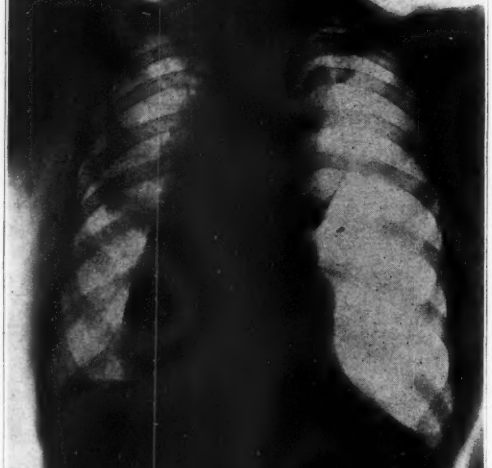

Plate 5b. Pulmonary abscess compressed by means of artificial pneumothorax. Complete collapse present. Compression was continued for 4 months. (Posterior view.)

and 24 as poor. Of the 54 good collapses 34 patients or 62.9% were classed as clinically well; 10 patients or 18.5% classed as bilateral progressive or unimproved; and 10 patients or 18.5% dead. Of the 24 patients with poor or

incomplete compressions 8 patients or 33.25% were clinically well; 6 patients or 25% bilateral progressive or unimproved; and 10 patients or 41.6% dead.

7. Of the 78 cases of artificial pneumothorax 53 or 68% developed a seropneumothorax, and 16 or 20.5% developed a pyo-pneumothorax.

8. Phrenicoexeresis is an operation resorted to as a rule in patients in whom air compression is not possible. It is also used as a preparatory procedure to a thoracoplasty. Of the 18 patients in whom no pleural space was found 2 patients were subjected to a phrenicoexeresis; one improved and the other became progressively worse; 8 patients were subjected to both phrenicoexeresis and thoracoplasty, and 7 of those patients improved and became clinically well and one was unimproved.

9. Of the 21 cases with spontaneous pneumothorax only one patient or 4.54% became clinically well; 6 patients or 27.27% were classed as bilateral progressive or unimproved; and 14 patients or 68.18% dead. Of these 21 patients with spontaneous pneumothorax 4 or 19% developed a sero-pneumothorax and 9 or 42.9% developed a pyo-pneumothorax.

10. Of the total of 22 cases of pyo-pneumothorax studied, 10 patients or 45.4% died; 4 patients or 18.1% were unimproved; and 3 patients or 13.6% were improved up to the time of writing this paper. Of the remaining 5 patients or 22.7% in whom hychloride irrigations was instituted and later subjected to thoracoplasties all were improved.

11. Of the 10 patients with pulmonary hemorrhage in whom artificial compression was started as the treatment, we were successful in controlling the bleeding in all.

12. A rib resection is absolutely contraindicated in pleurisy with effusion.

13. In a series of 7 patients with pulmonary abscess subjected to air compression, 3 patients were classed as good and 4 patients as poor. Of the 3 good collapses 2 or 66.6% became clinically well while 1 or 33.3% died. Of the 4 patients with poor or incomplete collapses 1 patient or 25% became improved; while 3 or 75% died.

14. Pulmonary abscess should not be treated by methods of lung compression in patients who have an emphysematous chest or who have a bronchial asthma. Neither should an abscess be compressed when it has no or only partial drainage into a bronchus. Postural drainage should be resorted to and neo-salvarsan used as an adjunctive treatment.

15. Bronchiectasis of the upper lobes requires no treatment; however, bronchiectasis of the lower lobes should be treated first by postural drainage or by artificial pneumothorax or phrenicotomy, depending upon whether the disease is characteristically unilateral.

Plate 5c. The lung as it appeared after artificial pneumothorax was discontinued. Patient had practically no sputum and was clinically well and discharged from hospital.

THE JOB OF EDITING A MEDICAL JOURNAL

A Few Sidelights on the Problems, Responsibilities, Perplexities and Possibilities of Such a Task*

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Chicago

Ever since Poor Richard started his almanac in the quiet Quaker purlieus of the domain of William Penn—even in fact ever since the first word of hand supplanted the word of mouth of the co-

*Address before Secretaries' Conference, Illinois State Medical Society, May, 1930.

lonial town crier—the free press and the free schools of the United States have been potent factors in the building of the strongest democracy in the history of civilization.

Edmund Burke's famous tribute to the world of journalism—that there are three estates in parliament, the king, the house of lords and the house of commons, but that in the reporter's or press gallery there sits a fourth estate far more important than all—is nowhere more applicable than in the case of scientific journals. This famous "Fourth Estate of the Realm" is the one forum, the one unprejudiced mouthpiece that any trade or profession may have. The lay press, kindly though it may be towards medicine or any other trade or profession, must be influenced necessarily though perhaps unconsciously by its individual ideas as to what is best for public policy or for its own issues. Naturally, then, a medical journal must appear as the mouthpiece, the printed delegate, the unsubsidized representative of that delicate and ironclad profession—the science and practice of medicine.

In a way a medical journal is really the medical profession on parade. It must have the respect of the public, both lay and professional, by being firmly ensconced on its own feet. This means that it must be edited and published at a minimum of expense. Such a condition calls for paring to the bone every item of outgo and of garnering to the fullest the harvest of profit.

Right here is where at the outset the editor of a medical journal, who in reality must act also as publisher, runs up against one of the first and worst snags—that of selection and discrimination. Such a situation calls for a direct and immediate application of the principles of elimination. In regard to the advertising columns of the medical journal, an editor is confronted constantly with the necessity of thorough purging.

After the columns have been purged and the advertising selected and published comes the still further task of keeping the advertiser in. Unless advertising "pulls," the advertiser discontinues. This means that unless physicians patronize the firms that advertise in the medical journal these firms will soon be non-advertisers.

In order to have readers and circulation, the editor of a medical journal must set forth a palatable and appetizing magazine. Fresh, crisp, interesting, educative articles must appear. Scientific educative information based on research or experience must first of all be exact and veracious; must be presented simply; have some reason for presentation; possess ample and accurate bibliography; be illustrated with sketches or photographs, if possible; set down in as few words as is compatible with intelligent comprehension, and, above all, in legible form for sending to the printer. Not only is this a requisite from a point of exactness but also of expense: Printers' wages are more than ample. Horace Greeley's notoriously bad handwriting is no longer considered a sign of genius. According to union requisites manuscript for publication should be typewritten, triple spaced and done on only one side of the paper. Further, the paper should be of good weight and in the upper left-hand corner should appear plainly name, address and phone number of the sender. All contributors should keep for their own files carbon copies of all manuscripts sent out. Loss or damage is sometimes unavoidable, even with the best of care and utmost precaution. Because many contributors do not follow these rules, there ensues much trouble for the editor. What applies to the advertising columns applies equally to the reading space. What is printed there must "pull" readers. And to achieve this "pull" an article must be sound, educative, timely, pungent and, above all, brief. The bulk content of the magazine must be varied, even in such a personal magazine as is the ILLINOIS MEDICAL JOURNAL.

From being the soul of wit in these busy times, brevity has become almost the sine qua non for an audience. There is far too much to do and far too little time in which to do it. Nobody, least of all a doctor, has the time to wade through interminal bogs on his way to get a fact, a method or a point. A limit of 2,000 words is considered advisable. A short article will be perused when a long one will be passed by.

Even in the field of economics—and economics and legislation have intruded themselves to an unprecedented extent upon the attention of the physician—there must be brevity, compactness and accuracy as well as that of immediacy. These are great times we live in and their speed is even greater.

Here is still another tangent to be considered in the contents of a medical journal. This is the human element. Chronicling of vital sta-

tistics in the profession, the marriages, births, deaths, or departures for other fields of physicians, and of changes in their affiliations, as well as of developments of various medical environments and of work in county and sectional societies must all be included in the perfect medical journal. Medical journals, like all other periodicals, are considered by their public in the light of a general utility. Everybody owns a newspaper and its editor, too, in the subconscious mind of the public. It is to the newspaper or magazine that the citizenry looks for a champion to right its wrongs. What is true of the lay press is true of the trade press. Unfortunately, the strength and competency of a periodical's scope often fails to rise to meet these demands from sheer physical limitation.

The editor of a medical journal, no matter how powerful he may be, can not put chiropractors nor any other charlatans out of business, nor off the air, nor do away with them in any matter whatsoever. The editors of medical journals do not control arbitrarily either the radio systems of the United States or practitioners of medicine. Some deeds have to be left for the state's attorneys. It is from the state's attorney that prosecution emanates against "irregulars" practicing without a license.

In addition to demands that would extend the job of an editor into the realm of a court and of a punitive bureau, the editor's mail is ever glutted with requests that would extend this jurisdiction into that of a research and information bureau.

There is no editor in the world, who is worthy of the name, who is not eager, willing and ready to give the most and the best service to everyone and anyone. It is nice to be able to locate the missing, and nicer yet to find men who have been re-located perhaps a dozen times, and a cause for grief when a patient has to be informed that inquiry shows that his beloved former physician is dead. To be beset by trivial requests that would require hours and even days of tiresome investigation is annoying to any editor. To a degree this is true of the continuous letters asking for the why, when and where of papers read or published on varied topics. Yet editors try their best to cover this service, too.

It does seem a bit thick, though, to any man to receive requests to prepare, and that gratuitously, papers for other men to read or articles for them to print, or asking for the purchase and supply of a complete biblography. Nor do pleas for recommendation of certain types of beauty specialists, cosmetic surgeons or endocrine specialists set any better on the ethical editorial stomach.

I have purposely left until this point one matter that is a sore spot in editorial offices all over the world and one of the most essential items in any copy. That is promptness. Punctuality of copy is as necessary as is plain and legible copy, and copy for the publication of which there exists a vital reason.

A magazine has to be planned out from one to three months in advance. Getting out a magazine is a matter of mathematics as well as of literature. So much space for ads, so much space for this and so much space for that. Often a paper arranged for one issue must be held over until the next because of a shift in authors' quantity that would disturb the scheduled size of the magazine. Frequently when the magazine has been half printed, in comes some dilatory contributor with material the editor's heart is simply aching to print but that has been received far too late to be included in that issue, and by the time the next issue is out this material has become stale or of no interest. Yet, let me repeat, this member's contributory column is one of the most desirable features of the ILLINOIS MEDICAL JOURNAL. Among other qualities it possesses is the revelation of the reaction the JOURNAL has upon its readers.

Dear to the heart of any editor are the comments on what has been the feeling of his readers as to what his magazine has published. For a medical journal the more the difference of opinion, the better the result of a good stiff argument. No letter received at the office of the ILLINOIS MEDICAL JOURNAL is ever either intentionally ignored or unanswered, no matter how seemingly trivial or irrelevant it may be. That obviously no editor can continually agree with all his readers has nothing to do with the case. The free press demands, deserves, desires and gets—free speech.

Personal prejudices and preferences of an editor are eliminated from the policy of a medical journal with the strict impartiality and impersonality as that with which an honest judge passes on the merits or demerits of a case.

When it comes to his work, an editor can have no self. He is merely the switch that flashes bulk opinion on the screen. More than anyone else must the editor have learned the great essential of life—the ability to put ones self in the place of the other fellow. An unequivocal asset for the editor of a medical journal is the skill to place his state or local society on record as to matters of policy in local, state and national questions vitally concerning the medical profession and also the public welfare and national prosperity.

Proceedings of the annual meetings have a right and an honored place in the pages of any medical journal. This is true both from a standpoint of record and of information for those members who may have been unable to have attended the convention. Publication of such annals however crowds out numerous papers in every volume.

When all ethical questions of selection, discrimination and general content have been cared for there remain still to be reckoned with the inflexible routine of the mechanics of the situation. Not only must routine and schedule be obeyed but allowance must be made for the "tangible pertinacity of intangible things." Time is required for the printing, binding, addressing, mailing and delivery of Journals that make up each issue. Customarily there are unavoidable delays or accidents in many places.

One of the perplexing problems of the editor is the advertising that appears in the Journal each successive issue. Medical advertising is difficult to obtain primarily. It is equally difficult to retain. Frequently prospects are solicited over a period of years and are finally secured only to be lost as advertisers in a few months. The usual complaint for discontinuance is that the advertiser does not receive a single inquiry from the doctors. Many advertisers are very finicky in their attitude and are continuously finding fault and looking to trivial excuses to get out of paying for the monthly bills. They delay in returning proofs for O. K., thus causing the editor much worry as well as necessitating frequent telegrams for hurry-up proof. Such procrastination on their part frequently holds up for one or several days the going to press with the Journal.

Some writers pay little attention to correct spelling, grammatical construction, properly organized composition, so the editor is compelled practically to rewrite the article to make it readable. Here is another imposition on time and ability.

Many articles submitted to the editor are far too long. The secret of getting over a message to the public is in short articles. The Soviet leader, Lenine, said, "Lord deliver us from the short article."

There is never any rest for the editorial eye. For the editor must reproduce from time to time important passing events, discoveries, etc., as these appear in other medical journals. To keep his journal alive he must comment editorially on current events. All this encroaches upon his time to an unbelievable extent. He must read, research and ever be on the alert.

In order to have an up-to-date medical journal the editor must have breadth and depth of vision, must be a wide reader, must be well posted and able to select, to write, to review, to abstract and to direct, and most of all possess a gift of prophecy.

A medical journal should own definite or fixed policies to guide the editor. The economic side of medical practice must by no means be neglected by the medical journal. The trend of the times must be approximated.

A medical journal should be a clearing house for practical information of a professional sort and a point of contact with the larger world of human life and interest; an active leavening and lifting force to make better doctors, better citizens and a potent and living factor in the general and medical educational scheme.

A medical journal must reflect the expressed wishes of the organized profession of the state. On matters about which there is some question of policy the journal must not go far afield. The journal must discuss editorially, the every day problems of the profession from all angles and much stress should be placed on these discussions. Editorial pages illustrating the highest ideals of the profession should so impress the reader as to be accepted as authoritative.

Good editorial work on a state medical monthly journal requires the greater part of the time and energy of several persons. The editor must take pride in his work. The work on a journal of the kind under discussion requires individual

personal attention. It cannot be done by proxy. The better the editor knows the profession as individuals, the better will he get along with his work as editor.

Editorial work should be paid a compensatory sum to get the best results. No physician of average ability can give a large part of his time year after year, for the good of the cause without compensation.

The editor's loyalty to the profession as a unit should be beyond question. He must be a student and march with the progress of medical science. He must be aware of every forward step, investigate every new development, and eliminate from the mass all theoretical vagary and error.

The unknown details for which the editor is not thanked far outnumber those that are known. By far the most of a medical editor's work never positively shows in his journal. The things for which you have most reason to be grateful are precisely those of which you have no conception. In the imagination of some, the medical editor sits in a very comfortable chair with little to do, drawing a fat salary. The truth is that he is poorly paid, and that he slaves day and night with little or no time for recreation in order that his journal may appear in a most presentable form. He has to steal time from his practice and his personal affairs to do his work.

A general policy of fraternity and warm fellowship among editors is highly desirable. We admire journals that are fearless and individualistic, free in spirit, fighting out a battle of their own for scientific progress and helping to maintain the integrity of the medical profession.

A firm and well coordinated editorial policy is an immense advantage to any periodical. To a medical journal it is indispensible. No one is required to subscribe to this policy as a condition of membership in any essential or desirable organization.

No man today, if he does anything else, can even glance over the type of the literature which appears in his own language to say nothing of that emanating from foreign countries. His medical journal should be to him a sorting station of the medical progress of the world, giving him at frequent intervals, abstracts or synopsis of the most significant articles which have recently appeared in all civilization.

Another of the problems confronting the editor that is particularly annoying and time consuming is the verifying of the literature that some authors of original articles quote. All sorts of sins and even crimes are committed in this respect. An editor dare not accept anything on faith but must verify every single bibliographic reference. To misspell the name of an author is an unpardonable crime. To state name of journal, date, volume, or page incorrectly constitutes not only scientific negligence but a serious discourtesy to the reader. The up-to-date journal guards this objectionable feature religiously.

It is the duty of the editor to protect his contributors against unguarded expression that might be open to serious misconstruction; to obviate any such happening requires careful scrutiny.

The work of an editor is not only absorbing but it may become burdensome. Certainly it claims individual attention and devotion. For the many difficulties and frequent disappointments that fall to the lot of every medical editor there is the compensation of the knowledge of work done as well as possible.

But it must not be thought from all of this that the life of an editor is one entirely of contention. Some of the most delightful experiences of professional life come through the medium of editorial service. While there must inevitably drift to the editor's desk some letters of a critical character, by far the greater number bring a different message—a message of commendation and encouragement. There develops between the editor and his army of readers a very intimate bond of fellowship. No day is ever so dark and discouraging that it is not brightened by kindly messages from appreciative readers, and even from contributors themselves. If the splendid men who write these letters could only know how much heart they put in an editor they would write even more frequently than they do. It is, after all, the reaction of the reader that brings to an editor his real reward. If the reader fails to express himself the editor never knows what that reaction is. There is no question but that the best work the editor does comes from the stimulus given by appreciative readers and when a man in the generosity of his heart writes an encouraging

letter to an editor he never realizes what a far-reaching effect it has.

This brings up another question that is frequently discussed. There is a rather widespread impression that doctors are not readers of their periodical literature. My somewhat extended experience as an editor convinces me that their habit of reading trade journals is underestimated. If the average practitioner could see the mass of correspondence that comes to an editor's desk in the course of a day, week, month or year he would be forced to conclude that medical periodical literature is read extensively. Men cannot write letters about articles they never read. So the case seems clear that they must read a great deal.

Naturally every writer is so impressed with the importance of what he has written that it is always a delicate matter to approach him with a request for curtailment of any kind. He honestly believes that he has told his story acceptably and in the fewest possible words consistent with clearness. For some outsider even to hint that the child of his brain is out of proportion is almost equal to intimating that his natural child is in some way deformed. However diplomatic an editor may be there is always sure to be some hurt connected with such a procedure. The wonder is that essayists are as reasonable as they are. Some of them are really helpful in the situation, though I cannot remember a single instance where an essayist has asked for his manuscript to be returned for the purpose of condensing it. If writers agree to a condensation they usually want the editor to revise the paper. I recall many instances where contributors wrote appreciative letters accepting the situation, and saying that they had no time to devote to condensing the paper and wished the editor would perform the task. This was done to the extent of reducing the manuscript from twenty-five to fifty per cent. and cutting out one-half of the illustrations, much to the acknowledged improvement of the articles. This was an easy way out of the dilemma even though the time expended by the editor might have contributed a few more hours or days recreation or to other less arduous duties.

There seems to be developing a much better understanding between contributors and editors than formerly existed. This is due to increasing consideration on the part of both. Editors are more and more inclined to recognize the point of view of contributors, and the latter are in turn becoming more charitable towards editors. All that is necessary for a perfect understanding is that each shall endeavor to see the other side of the question.

The details of getting out the journal every month are more numerous and trying than can be imagined by anyone who has not followed this work from beginning to end. With it all there is much of absorbing interest every day. There is assuredly a real inspiration in contact with members of the profession in all sections of the country and also in foreign lands. Without this there would be little to relieve the tedium of a service which is more exacting than any other connected with professional life.

I cannot close without a word of appreciation to the state officers and the members of the council, and to the county secretaries who are here assembled, for their uniform kindness and cooperation in the past, and without also expressing the hope that their interest in the Journal may continue to increase, and that the editor and staff may be given the benefit of many valuable suggestions for improvement in the future. It is only by the active interest of all of our members that our official publication may be brought to its fullest fruition as the mouthpiece of organized medicine in this country.

I recently heard of an incident in which a physician had written what was, in his opinion, a very splendid scientific paper, and sent it to the editor of a certain journal. The editor sent it back with a letter saying that while it contained some very excellent material, it was much too long, much too involved, and would not be read in its present form, and asked the writer to cut it down. He received in answer an insulting letter to the effect that the writer knew what he wanted to say and how to say it. Of course, he did not get very far with that. The editor told him, however, that he was going to take the liberty of having the paper revised and would then submit it to him. He turned it over to a manuscript editor who reduced it by about half and it was then returned to the physician without any comment or any marks of identification. A telegram came back saying that this was the best paper on the subject the gentleman had ever

read, adding, "You can throw mine in the waste basket." It was his own paper, properly edited, with some of his idiosyncrasies eliminated. The paper was published in its revised form and created a good deal of favorable comment.

25 East Washington St.

DISCUSSION

Dr. Olin West, Chicago: The trials and tribulations of an editor, or any officer of any medical society, are great, as you all know.

HEALTH APPRAISAL OR PERIODIC EXAMINATION OF APPARENTLY HEALTHY PERSONS*

JOHN M. DODSON, M. D.
CHICAGO

The topic assigned to me for this program is "Health Appraisals." The medical activity which is so designated has been variously spoken of as a "Health Inventory," "A Health Survey," "A Periodic Estimate of the Physical Condition" and in other similar terms. None of these expressions are ideal, nor is the phrase "Periodic Examinations of Apparently Healthy Persons," which is most commonly used, entirely free from objection. Inasmuch, however, as this last designation was officially adopted in 1922 by the House of Delegates of the American Medical Association and appears on the blanks which are published by this Association for use in these examinations, it would seem best to prefer it to other terms. It is proposed in this paper to discuss briefly the origin and development of this type of medical service, the actions of the American Medical Association in regard to it, the steps which have been taken to promote its growth in various state and local medical societies, and, as nearly as can be ascertained, its present status in the minds of the members of the medical profession and of the public in the United States.

History. There have doubtless been for many years a few persons in each generation who, while in apparently good health have had themselves examined at intervals by physicians as to their physical condition and their freedom from physical defects or from faulty habits of living. Three-quarters of a century ago my own father, a physician in Wisconsin, was asked by a wise client to advise him and his family about how to keep in good health, the service to include such physical examination of the members of the family as the doctor thought necessary. An annual fee was paid for this service with the understanding that it was not an advance payment for medical care in times of illness. Attention for actual sickness was to be paid for in addition to the health advice.

The first suggestion in English medical literature that such a health examination is worth while seems to have been made by Dr. Horace Dobell, an English physician about seventy years ago. In 1861 Doctor Dobell wrote:

> "I am perfectly convinced from my own observation and experience in practice that patients never think of consulting their doctors until these conditions of impaired general health have advanced far enough to have been developed into some form of disease, and that thousands of people, believing themselves to be in health, are nevertheless undergoing these early, occult and evasive stages of defect in the physical state. I wish then to propose, as the only means by which to reach the evil and obtain the good, that there should be instituted, as a custom, a system of periodical examination to which all persons should submit themselves and to which they should submit their children."

Dr. Dobell describes very clearly what such a health examination should include, but his suggestion fell on barren ground, and it was nearly forty years after the appearance of his article that the next contribution to the subject came from the pen of the late Dr. George M. Gould. This was published in the Journal A. M. A., in July, 1900, and presented essentially all arguments for such health examinations that have appeared in the abundant literature on this subject which has been published in the last thirty years. This article, like that of Dr. Dobell, attracted little attention for some years after its publication, but in 1909 Dr. Burnside Foster of the Provident Life Association proposed to the Association of life insurance presidents that such an examination be made of policyholders at five-year intervals.

Such an examination of employees of the New York City Health Department was instituted as a requirement in 1914 by Dr. Goldwater, then Commissioner of Health. Health examinations (conducted by the Life Extension Institute) at two-year intervals have been offered to the policy holders of the Metropolitan Life Insurance Com-

*Read before Illinois State Medical meeting, Section on Public Health & Hygiene, May 20, 1930.

pany for several years. Other insurance companies have followed suit.

THE AMERICAN MEDICAL ASSOCIATION

The House of Delegates of the American Medical Association took definite action at the annual meeting held at St. Louis in 1922 in the following resolution:

"Whereas, the need and value of periodic medical examinations of persons supposedly in health are increasingly appreciated by the public, it is recommended by the Council on Health and Public Instruction that the House of Delegates authorize the Council to prepare suitable forms for such examinations and to publish them in the Journal A. M. A.; and that the county medical societies be encouraged to make public declaration that their members are prepared and ready to conduct such examinations, it being understood that the indigent only shall be examined free of charge and that all others are expected to pay for such examinations."

A blank form was drafted and a report prepared by a committee of the Council (now Bureau) of Health and Public Instruction, of which committee Dr. Haven Emerson was chairman. This was presented to the House of Delegates at the San Francisco meeting in 1923 and adopted.

An edition of several thousand copies of the blank was printed and placed on sale, as was also an edition of the report of Dr. Emerson's Committee which served for the time being as a brief manual of instructions for the conduct of the health examination.

In the spring of 1924 the secretary of the Bureau of Health and Public Instruction was authorized by the Board of Trustees to appoint a committee to consider such revision of the blank form as seemed to be indicated. This committee of seven physicians, giving careful consideration to the comments and suggestions which had been received, made some changes in the original blank.

At its meeting in Chicago in 1924 the House of Delegates reaffirmed its conviction of the importance of this form of medical service, urged that state and county medical societies give special consideration to this matter and referred to the Board of Trustees the following resolution:

"Whereas, The American Medical Association is in sympathy with, and has officially approved, periodic medical examinations of apparently healthy persons; and

"Whereas, Physicians generally require more concrete formulae and suggestions by which such health examinations can be effectively accomplished; and

"Whereas, Such assistance can be best provided by a properly prepared manual compiled from existing experience in this field of medical practice; therefore, be it

"Resolved, That the House of Delegates direct the Board of Trustees to immediately cause such a manual to be published and made available to all physicians."

Pursuant to this action the committee which had revised the blank prepared a Manual of Suggestions for the Conduct of Periodic Examinations of Apparently Healthy Persons which was printed and ready for distribution in the summer of 1925. This Manual included the original report of Dr. Emerson's Committee and in addition a section on the advice to be given to the health client.

At the meeting of the association held in Atlantic City, May 25-29, the following resolution was passed:

"Resolved, That. owing to the nation-wide need and interest in periodic health examinations, this matter be referred to the Executive Secretary of the Bureau (formerly Council) of Health and Public Instruction with power to call a conference at such time and place as seems best to correlate the work already done and divise a nation-wide plan for adoption."

This conference was held at the American Medical Association building in Chicago in November, 1925, in connection with the annual conference of the secretaries of the State Medical Associations.

Sixty-six thousand and four hundred copies of the Manual of Suggestions have been distributed, in large part through the state-wide distribution by state medical societies; 601,000 copies of the blank form have been sold and the demand continues steadily.

In a questionnaire addressed in 1926 to the secretaries of the 2,100 county medical societies constituent to the American Medical Association. the final question read as follows: "Have any steps been taken by your society to promote periodic examinations of apparently healthy persons?" Of the 1,226 replies to this question, 254 were in the affirmative.

Slight amendments to the blank and also to the Manual have been made in subsequent printings by the Bureau of Health and Public Instruction, advised by the special committee previously mentioned. These changes have been very few and only of minor details. Notwithstanding

the printed slip which accompanies each lot of blanks or manuals distributed requesting criticism and suggestions, very few indeed have been received. The text of both blank and manual as well as the size and form of the blank seem to be satisfactory to the many thousands of physicians who have used them. The Massachusetts Medical Society has printed a blank of its own devising and also a handbook. In Connecticut the Department of Health has preferred and used a blank somewhat similar to but smaller than that of the American Medical Association.

In North Carolina the manual was reprinted in the State Medical Journal with the consent of the American Medical Association because funds available in North Carolina could be used for that purpose but not for purchase of the American Medical Association manual.

Development of Interest Among Physicians and Public. The stimulation of interest in this form of medical service has been sought in a variety of ways. County, district and state medical associations have devoted one or more sessions to a discussion of the subject, presented by some physician who was competent to present it and the discussion has often been accompanied by a demonstration of the method of conduct of such an examination.

Demonstrations on Physicians. One of the most effective schemes was that of the Medical Society of the County of Kings in New York. In the earliest days of the movement at a meeting of the society in 1923, after presentation of the matter and a general discussion of its importance, about 100 members offered to submit themselves for a physical survey by fellow members of the society who were especially competent to make it. The findings in these examinations, conducted at the convenience of each examiner and of the one to be examined, were reported to a committee of the society, tabulated and then the summary presented to the society at a later meeting. The number of physical defects found in these supposedly quite healthy men was a revelation that was very effective as a demonstration of the need and possible benefits of such periodic examinations.

This plan of a demonstration has been followed in other communities. The publication of the reports of such examinations in the local press, when properly written up and presented, is one of the most effective means of arousing an interest on the part of the public.

Very early in this movement steps were taken to organize a society in Illinois for the promotion of an interest in periodic health examinations. At a meeting held at the Sherman House the matter was discussed with considerable interest and steps were taken to perfect such an organization. It seems to have died an early and very complete death.

During the past autumn and winter an extensive campaign was conducted in New York and vicinity by the medical societies of the five boroughs in the New York district, cooperating with the New York City Department of Health, the Tuberculosis Association and other agencies.

In Wisconsin three years ago the district councillors held a special meeting to consider this matter. One councillor in each district was selected who agreed to attend the meetings of any of the county medical societies in his district when a program was arranged to be devoted to this topic, this to be accompanied by demonstrations.

In North Carolina the State Health Officer, the late Dr. Laughinghouse, appointed a physician, especially qualified for such work, to travel about the state for some months, calling on each physician, making a physical examination of the doctor and any members of his family who volunteered for such a survey, and later presenting the subject to the local medical society. This visit was followed, in many cases, by a talk to the public about periodic health examinations and resulted in arousing much interest in the matter on the part of both doctors and laymen.

Response of the Public. A study of this movement during the period since its inauguration by the American Medical Association, in 1923, gives evidence that it is much more difficult to arouse the physicians to the importance of this matter than it is to interest the public. Numerous articles in magazines, newspapers and elsewhere, discussions in lay gatherings and societies of all sorts have brought the lay public in many localities to an appreciation of the great need and value of physical examinations of every human individual at reasonable intervals.

In Dentistry: In the associated field of dentistry it is a well established custom for the dentist to examine every member of the families

whom he serves at intervals of three to six months.

In Pediatrics: Thousands of physicians whose practice is largely among children, especially where they reside in cities of some size, now devote the major part of their time and attention to keeping the babies well by inspecting them, and the care which they are receiving, at monthly intervals, and to instructing the mothers in the matter of their care.

Adults—Life Insurance: More and more the leading insurance companies are finding it profitable to offer to some of their policy holders physical examinations at intervals, perhaps most commonly, of two years. The plan adopted by the John Hancock Mutual Insurance Company, and one or two others, is especially satisfactory. This company notifies each holder of a policy exceeding a stated amount that if he will submit himself for examination by a competent physician and will agree to follow the advice given by the examiner as to the correction of any physical defects found, and to the amendment of any faulty habits of eating, working, etc., the company will pay the fee of the examiner upon receipt of his report that he has carefully examined the policyholder, who has agreed to follow out any instructions given him by the doctor. The examining physician is to be selected by the policyholder (usually his family doctor). He is not required to be an examiner of the insurance company or of any institute or association designated by the insurance company.

In Industrial Plants: The requirement of a physical examination as a condition of first employment, and, with many companies, a re-examination at intervals, is growing very rapidly among industrial organizations. Indeed, it is difficult to understand how any employer of labor on a large scale can afford to risk the employment of men or women without such a guarantee of their fitness for the work they are to undertake. The Workingmen's Compensation Act or the Employees' Liability Act all but compel the employer to adopt such a plan.

Railway Employees: All of the large railway companies now make physical examinations of their employees. The frequency and character of the examinations differ considerably in the several railway companies but the tendency in the last few years has been distinctly in the direction of more frequent and thorough examinations.

School Children: The rapid growth among educators of interest in the health of school children and all that pertains to it, is one of the most striking phenomena of our time. The custom of having all children examined on their first entrance into school, and at intervals thereafter, is extending very rapidly, the examinations being conducted by the school physician or the family doctor. Failing this, an *inspection* by a school nurse or by a teacher, for the detection of any signs or symptoms which point to any departure from the normal, is being carried out with good results in many places.

Colleges and Universities: Physical examinations of college students who engage in athletics have been made in many schools for some years, but the systematic physical survey of all students with reference to safeguarding and promoting their health is very recent in most schools. The custom, however, is growing rapidly and is giving rise to a new medical specialty . . . the school and college physician . . . to be added to the already too long list of specialist medical groups.

Volunteer Activities: Numerous organizations, such as Y. M. and Y. W. C. A., Boy and Girl Scouts, Campfire Girls, and others similar in character and purpose, have become deeply interested in this matter and are arranging to have their members given the opportunity to safeguard health in this way. Indeed, it is a comparatively easy matter to arouse an eager interest in this movement and to sustain that interest year after year if proper steps are taken.

ARGUMENTS FOR AND AGAINST HEALTH APPRAISALS

It would be profitless at this time to review the arguments for this form of medical activity. Whether we of the medical profession believe that such examinations are worth while or not, it is pretty evident from what has been said that the widespread demand is certain to grow rapidly. Discussion of the *pros* and *cons* is, for us, only of academic interest. The real question is this: *"Shall the medical profession recognize the great and increasing importance of preventive medicine in which the personal health survey is such a fundamental and vital essential?"* Shall

it cooperate wholeheartedly in the promotion of this development, seek to direct it into proper channels, and tender the service of its members in making such examinations in a satisfactory manner at a reasonable price?

Constant complaint comes from laymen that physicians to whom they apply for such examination are apathetic, indifferent, and sometimes, even hostile. They either belittle the need and value of the service or accept a fee for a casual, perfunctory, inadequate and unsatisfactory "once over."

Many of the objections made by physicians have been not to the basic idea but to some of the statements of its overenthusiastic proponents.

Doctor as Health Advisor: First, undue emphasis has been laid on the mere examination for physical defects. Important and numerous as these are, especially in children, the discovery of faults of habit and environment are of great significance in many cases surpassing, in their effect on the health of the client, physical impairment. Perhaps the most far-reaching effect of the health examination program is the reestablishment, on a stronger basis than ever before, of the relation of the family doctor to his clientele. When the custom becomes a general one it will put the doctor in a position to be of the largest possible service as the health advisor of his clients. Of course, he must be paid reasonable and adequate fees for the advice given and it is certain that the vast majority of persons will be perfectly willing to pay such fees.

Lengthening Life: Second, much has been said about the increased longevity which is to result from this periodic check-up on the physical condition. Too much emphasis should not be laid on this possibility. We have as yet little conclusive evidence of the actual extension of the life span which can be expected from this practice. The thought that such examination may add a few weeks or months or even years to the life of an individual who subjects himself to such appraisals makes a strong appeal to many, but after all, this time extension is wholly unpredictable in any particular case and of doubtful advantage. The wise man's real hope is to live out his normal life period in the most complete health, comfort and efficiency possible for him to attain. One of the agents most certain to promote the attainment of this end is a wise and capable medical advisor.

Elaborately Exhaustive Examinations: A third mistake which is made by many is insistence on an impractical, unnecessarily prolonged and exhaustive examination. What does one mean by "exhaustive examination"? There is almost no limit to the amount of time, the number of tests and therefore the essential cost of the physical exploration which may be made of the human body. Applying all of the refinements of diagnostic procedure known to the clinical or laboratory technician, the pathologist, the roentgenologist, and the numerous and ever-increasing number of specialists one might easily devote a week or more of eight-hour days exclusively to the examination of a single normal individual without exhausting all the possibilities. But to what purpose? Beyond the information gained by a reasonably careful physical examination, as described in the Manual of Suggestion, these ultra-refinements of the several specialists rarely reveal additional facts of importance, excepting where there is obvious reason to suspect some defect indicating reference of the client to a specialist. This attitude of insistence, by many physicians, on a very elaborate examination, if any at all is undertaken, and at a fee which is prohibitive for the vast majority of persons, is incompatible with the development of any widespread adoption of the custom of periodic health examinations.

Examination by a Clinical Group: At many of the health examinations made gratuitously, as a demonstration, at health expositions and the like, the work has been arranged for a group of specialists, oculist, laryngologist, internist, roentgenologist, et al. In private practice a few such groups have been organized to make these examinations. Such a procedure is unnecessary and conveys the erroneous impression that a satisfactory examination can be made only by such a crew of specialists. Ample experience has demonstrated that a good general practitioner with the appliances which he carries in his hand bag can make a reasonably thorough, worth while examination, including the summing up of his findings and the advice given to his client, in from 35 to 45 minutes. In most communities a fair compensation for this service is from $5.00

to $10.00. Of course, if in such an examination evidence comes to light of a serious physical defect which needs attention, the person becomes a patient and should be examined more exhaustively as to the defect found.

Preventive vs. Curative Medicine: It is said that the doctor's advice is sought in order to obtain relief from pain or distress, that he is not visited for the purpose of aiding the client to prevent disease. Of course, it has been, is now, and always will be, true that the usual motive which brings a client to the doctor is the desire for cure, but the public is rapidly learning that the physician can be of the greatest service in preventing disease, that expert preventive advice is a good investment, and that the family doctor has a wide field of usefulness as a family and individual health advisor.

The medical profession of the United States, represented in the American Medical Association and its constituent branches stands committed by official action to a program of activity in the field of periodic examinations of the apparently healthy. It can command the hearty, intelligent cooperation of many lay organizations, groups and individuals. One of the most powerful of these organizations is the National Congress of Parents and Teachers through their annual Summer Round-up Campaign of the Preschool Children. The Congress with a membership at the present time of about one and one-half million in the 20,000 local associations, inaugurated this nationwide movement in 1925. They asked the aid of the medical profession and have sought to conform to the methods of procedure advised by the American Medical Association. In the 1929 campaign more than 50,000 children were examined in the 1,500 local associations reporting. About 110,000 defects were discovered for which the children were referred to their family physicians for correction, or, in the case of children of indigent parents, to an established clinic. Correction of defects by the family physician were reported in over 26,000 cases.

Important as is this campaign for the welfare of the annual crop of pre-school children, it is not being conducted solely for the purpose of detecting and amending their physical defects at that age only. It is recognized by the leaders of the Congress that it has much larger possibilities.

In the circular sent out this year from the National headquarters to the local associations the opening paragraph reads as follows:

"The Summer Round-up of the Children is a campaign to send to the entering grade of school a class of children 100 per cent. free from remediable physical defects. The ultimate goal is to educate parents to the need for periodic examination of their children by the family physician and dentist in order to insure correction of hampering defects which might not otherwise be discovered." On page 5 of the leaflet is this paragraph headed "An Educational Project:" "Because of the unique and strategic position held by the 20,000 local units of the National Congress, working in and through the schools, action is secured *by* the people instead of for the people . . . a course which is essential if parents are to be educated to the necessity for periodic examinations from birth onward as the best possible investment in the health and welfare of their children. When parents are so educated they will have their children examined at regular intervals by the family physician and dentist and will be willing to pay adequate fee for such service."

No project has been devised, as far as the writer is aware, which seems more certain than this Summer Round-up Campaign to promote the education of the public as to the importance and value of periodic health examinations at every stage of life.

The medical profession is expected to do its part in meeting the demand for this essential health service. It is inconceivable that any considerable proportion of the members of the American Medical Association can long remain unconvinced of the wisdom of the actions already taken by the Association in regard to this matter or can fail to respond cordially to the call for service in this field.

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DISCUSSION

Dr. C. U. Collins, Peoria: Dr. Pollard complained a little that he didn't know that he was to be on the program until Friday evening. I have still a greater complaint than that. I didn't know it until ten o'clock this morning. If the secretary notified me, I didn't receive it. It just happened by chance that a doctor associated with me happened to mention to me that he had seen my name in the ILLINOIS MEDICAL JOURNAL program and within two hours I got ready to come and I arrived here.

Dr. Dodson hasn't left much to be said and particularly to this audience. He was correct, I think, in saying that the profession hasn't been sold on this proposition yet. There are quite a number of physicians who

are not taking the interest in it they should and do just what the patients say, that they make light of the idea and say, "You are looking well. What in the world do you want to be examined for?"

One of the greatest surprises I had was about a year ago when a prominent official of the American Medical Association gave an address which I happened to hear, in which he rather deprecated periodic health examinations. As I remember it, the thought was that if a little albumin was found in the urine and the patients told about it, they would worry about it and it would cause them to be miserable when there was no ground for it. It was not a very good argument, but it simply illustrates that when a prominent officer of the American Medical Association talks that way, it isn't to be expected that a lot of the rank and file of the public will be converted yet to the periodic health examination.

Dr. Dodson made one statement about the school physician that he should be in general practice. I can't agree with him in that, perhaps because I live in a smaller city. I am very certain that the school physicians will not agree with him. Surely, if they were in general practice and competing with the other physicians in the locality, their troubles would be increasing and they are difficult now at best; and I feel sure that it is much better that the school physician be not in general practice in the locality where he is working and be not in competition with the other physicians in that locality.

There is no doubt but what the examination is a good thing. I am glad to report as far as Peoria is concerned that the number coming in seeking periodic health examinations is increasing. Another thing is that they don't mind paying for it and they are glad if nothing has been found. They are perfectly willing to do that and if we don't find anything abnormal they are perhaps better pleased than if we did find something, but they don't regret the expenditure of the money.

Every once in a while we find some individual with high blood pressure. He doesn't know a thing about it. There is something peculiar about high blood pressure in that it gives a sense of well-being and the patient feels real good and doesn't know that anything ails him, and very often we find high blood pressure where it hasn't been suspected at all. Not long ago a young woman came in. She wasn't sick. She just didn't feel exactly up to her usual strength. She came just for a general examination, and we discovered quite a good deal of albumin in the urine. She had a brother who died from Bright's disease in his twenties and she didn't know what ailed her, yet we discovered that. It probably can be remedied; at least her years will be extended a good deal longer than if she had gone on and not known anything about it.

I think there is another thing that should be emphasized in talking to local clubs and parent-teacher organizations about the periodic health examination, and that is that they are apt sometimes to think perhaps it is a scheme of the doctor to make money, to get a lot of people to come to get examined and increase their recompense. It should be emphasized that if they go on and become invalids or become diseased, the doctor will get a great deal more money from them in the treatment of the disease than he would from simply some periodic health examination. I often speak about it from a surgical viewpoint, that a mole subject to irritation certainly will not cost near as much to remove as cancer after it has developed from the mole. So that I think we should explain that it isn't a scheme, that it is not really adding to the money that the physician receives from that patient but it really takes from him by preventing something they might have in the future.

Dr. Gottfried Koehler, Chicago: I think I voice the sentiments of everybody here on this occasion that we are indeed very sorry that Dr. Dodson did not have the opportunity to present his very excellent address to a larger audience, particularly a larger audience of physicians, and therefore, I hope that this paper will be published and thus brought to the attention of the medical profession.

There was one point in Dr. Dodson's paper that I just want to emphasize very briefly, viz.: that we ought to rely a good deal upon the existing medical agencies to put this thing over. I think we are all agreed that it is very essential in our future public health work that personal hygiene should be applied after a thorough physical examination, if it is too late to start this with individuals past fifty years of age, as the railroad men pointed out and as we know from our own expedience because the foundation for many of these infirmities and defects are laid earlier in life and at fifty years very oftentimes cannot be remedied.

Doctors are not good salesmen. They practice a code of ethics which almost prohibits them from going out and selling their services. They are not like merchants in this respect. Therefore, there is a good deal of hesitancy on the part of the physician to sell periodic physical examinations even to their individual patients. You cannot blame them for that because they have been educated along these lines and, furthermore, it is a question whether that is the best way to put this over. As Dr. Collins points out, you hear it right along, "Well, the doctors are trying to make work for themselves." It is true that when physicians take an active leadership in this work in the community there is always a feeling that they are trying to make business for themselves. I think there has not been as close a relationship between the doctors and the nonmedical organizations that could be relied upon to put this thing over.

There is a great difference between the work that the fire insurance companies and the life insurance companies do in this respect. The fire insurance companies maintain in practically every large community a board of underwriters. They watch very carefully the fire departments. They make rules and regulations and they maintain a fire patrol and all that is deemed necessary to save fire losses. The life insurance companies, although they have a commercial interest in the matter, and they are getting large surpluses on account

of the work that the doctors and the health departments are doing in the extension of the life span—in some instances they are paying it out in dividends and in many instances it is clear profit for the life insurance companies; they should get behind this thing and handle it through the medical profession. I do not believe this question can ever be handled en masse. It is a personal proposition. As has been emphasized, this afternoon, it is not directly a question of finding defects but it is a question of correcting habits. A man may have no defects. His habits may have to be corrected. A man may indulge in certain habits. If personal hygiene means simply to taboo everything, then people will look upon the doctors and health officers as joy killers and they will not heed them. People want to get as much happiness out of life as possible. But, therefore, taboos are ineffective. There should be a cooperation between the practicing physicians and the insurance companies, as has been done by one company as pointed out by Dr. Dodson. I think the life insurance companies and the medical profession should get close together on this proposition, like the fire insurance companies have gotten together with the mercantile and business interests of the city and business against fire. The fire insurance companies are very alert in this matter because what they are doing saves them money. Why should not the life insurance companies act in the same manner?

Dr. Collins: And pay physicians to help them.

Dr. Koehler: And pay them for it, yes. I am sorry Dr. Dodson's paper was not heard by a greater number of people. The industrial and railroad surgeons presented most excellent papers here this afternoon. I think we are fooling ourselves as to the number of people who are having physical examinations. From Dr. Dodson's paper it appears this is growing by leaps and bounds. I think we are lagging very much. With certain age periods, with certain groups like the school children and the industrial workers, this work has started; the physicians working with the railroads have had great results. If that lesson could be brought to the public and to the doctors at large I think it would stimulate this work a great deal.

Dr. Arlington Ailes, LaSalle: I endorse Dr. Koehler's remarks about the life insurance companies, and also I think, like him, that there is a very small percentage of the public availing themselves of these examinations. I think there are two big reasons. I think there is a lack of confidence on the part of the general public that the local practitioner can give them something worth their money. And I think another reason is that when men and women feel all right they will hesitate a long time to give five or ten dollars for a physical examination. It is a different matter when they get a pain, a fever or feel ill. These will drive them to the physician.

I am a full time health officer and would like to get Dr. Dodson's reaction to my discussion or suggestion that may occur to him. We examine school children and give them what we call a screening. The defects are listed and a notice sent home to the parents. Then the nurse surveys this list of defects and gives to the child, needing one, a little blank on which the major defects found are written. He is then urged to take that blank, accompanied by a parent, to the family physician. These children are stimulated in various ways in the school by the teachers and nurses, and the parents are stimulated by the home visits of the nurse to take the children and blanks to the family physician for a careful physical examination. When they go the minds of the parents are already built up to pay for this service. In fact, at the bottom of the blank is a printed line which states that "This blank in no way implies free service."

What I am thinking of now is to use this same sort of screening with pre-school children, having the mothers bring them to the clinic, giving them an examination with the mothers present, and urge that children with major or remediable defects be taken to the family physician for a more complete examination and advice. They will come to the health department for this preliminary examination because it is free. Also please keep in mind that the examiner at the clinic is in no way connected with the practice of medicine.

Now why can't we carry that same sort of thing on up to the adult group? Let him also get a sort of screening process, if it would be possible to have the personnel in the health department. So then we could detect some of these major defects, and say to this individual: "Go to your family doctor and have a more complete physical examination." Then the medical profession should be prepared and willing to do a good physical examination and work with the health department. This implies, of course, that the health department has the personnel and the doctors to carry out their part. We might then get somewhere.

Dr. Collins: What do you mean by a screening process?

Dr. Ailes: Our screening process is this: The nurse in the school tests the vision and hearing. We go to the school and the nurse brings the children before me and we give them each about two minutes examination of the eyes, ears, tongue, throat, heart, lungs, etc. Look them over, examine the skin for disease, note its texture, elasticity, subcutaneous fat, etc. One, when experienced, can detect a great many things in just a minute or two.

Dr. Collins: Why do you call it a screening process?

Dr. Ailes: Because the term seems to fit. The mother is not present for the history. We do not make a diagnosis or claim that the examination is accurate or complete, and it is made rapidly. It is a sorting process. Take the tonsils, for instance. We can't take the child if he has had repeated attacks of tonsillitis, rheumatism, etc., with any certainty of a reliable answer. If the tonsils look a little red or abnormal, we indicate the defect with one X. If they show considerable hyperplasia, showing enlarged veins and adhesions to the pillars, enlarged tonsillar glands and other evidences of repeated infections, we indicate the fact by two X's, which means that the child should be taken to the doctor for a physical examination. If there is still

greater disturbance, we give three X's, which means that in our opinion the child should be taken to the doctor for examination and advice without delay.

Dr. Collins: I just wanted to know what screening meant.

Dr. Ailes: That is what it means. We do not aim to make an exact diagnosis, but aim to screen the children—those needing attention from those who apparently do not. Not all children are urged to go to the family physician, but if double or triple X's appear on the child's examination card, it is the nurse's duty and the teacher's duty to encourage that child to take the slip which we give him to the family doctor and have him make the examination and advise the remediable measures that he thinks indicated. We then award that child certain merits, if the physician indicates he needs no attention or when the defects are removed. This is the way we work with the school child through the family physician.

I was asking Dr. Dodson's reaction to a plan that would similarly screen the infant, pre-school child, high school child and adult, where the examining physician would not be engaged in private practice. When they went to the doctor then they would be in a frame of mind to pay for the service. The doctor then must have the proper attitude and give the child or person a careful physical examination or there will be a very poor reaction to the whole campaign.

We have this plan in operation for the infants, school children and high school, and I think it is practical to use the same system for pre-school children. I am wondering if it could not be made applicable to the adult.

Dr. Charles H. Miller, Chicago: I would like to add something to the discussion. It happens that I am charged with the presentation of a plan of periodic health examination at the Health Exposition in Chicago. And I am astonished at the attitude of children compared to adults as they go by that booth, at the degree of intelligence which they show along health subject lines. We haven't half the trouble to get them to appreciate the value of maintaining health, of recognizing what health examinations mean, as we have with the adults, and that enables me to speak on the subject of what may we do to bring in the older individuals which, as Dr. Koehler has stated, we are going to have in increasing number as the years go by.

It happened to me that for thirty years I have been the physician who attends to the ailments of the South Side division, men employed by the South Side division of the Chicago Elevated Transit Company, that consolidated company, regarding whose personnel Dr. Fisher has been telling you. These men maintain a mutual benefit association for which I have been physician for that period. These men, as he told you, are required to be examined by their medical officer, they are examined from a traveling car, etc., and they are required to come back at stated intervals to be examined, and a large number of them under my control or in my clientele come to me to find out where they are at. They are perfectly sold on the wisdom of this examination. They realize its value to them, and these men, many of them—I have been personally acquainted with them in my capacity of medical officer for a long period of time—they come in regularly every three or four months to find out how they are getting along, how they are, and it is through this form of dissemination of knowledge that the older people will be informed, how they will be taught the wisdom of this. We don't need to talk about the value of that. We know it. It has come within my experience within a few weeks how men charged with operating these trains and motors have been found to be in a condition of most precarious danger, not alone to themselves but to everybody else under their care, and who have been caught by Dr. Fisher's organization. And there is no difficulty from the standpoint of their Union with that at all. They handle it so nicely that there has been no difficulty and yet they are all Unionists.

Dr. John M. Dodson, Chicago (closing): I want an opportunity to set myself right. I perhaps spoke a little hurriedly,—it is not in my paper with reference to the school physician. I do not mean to say that I think there is no room for such a functionary, but there are a number of places, especially in some of the states, where the attitude of the school physician and the health office representatives are antagonistic,—a very unfortunate situation. I think the school physicians have attempted in some places to overreach their proper prerogative. The purpose of this whole movement is to get every child and every individual into the hands of the family doctor. He is the one ideal examiner for that individual all the way through. Why? Because he can follow him and see that the correction of physical defects or amendment of bad habits is carried out. Unless that is done, the examination is useless.

What Dr. Collins said with reference to the objection raised, that the finding of some kind of defect might alarm the individual, is to my mind a puerile objection. Is it better that a man become tuberculous and remain ignorant of it for fear he will be scared about it or should he know the truth and be directed as to what to do? Any physician who is fit to practice medicine at all should have the ability to tell those facts to that patient in such a way as not to alarm him unduly.

No, doctor, I am not against the school physician; but I do feel that he should be directing the child to the family doctor, who is the person to whom the client, child or adult, ought to go for thorough examination and advice. These prelminary inspections (I like that word. It is not an examination but a preliminary inspection), these preliminary inspections are being made by nurses or by teachers traiend for that purpose. That is being done in the city of New York, also in Detroit and in many smaller cities. The object should be to suspect something out of the ordinary and then direct them to the family doctor. This summer round-up pre-school campaign is doing that.

I think we made a mistake in our rather unyielding attitude with reference to some of the plans of the parent-teacher organizations. For example, a great effort has been made to have these children sent to the offices

of the family physicians. Two things happen when that is done. First, very many of them do not go; there are nothing like as many examinations made by physicians in their offices as are made when all are asked to assemble at one central place at the same hours; second, there is lost the spectacular propaganda effect of the lining up in one place at one hour on a definite occasion of these pre-school children. We are trying to educate the public about the value of these physical examinations. When the nurses, teachers or members of the parent-teachers' association have gone around from home to home in that community and rounded up every child that is going to school in the coming autumn for the first time, asking them all to come to a definite place at a definite hour, it has much the same effect as a circus parade. It is an educational measure of value. Of course, that cannot be continued indefinitely. We do not expect the doctors to give their services free for examination of these children indefinitely; but it will take three, four or, in some places, more years perhaps to educate the people in that community to the understanding that every one of those children ought to be examined at regular intervals through life. And when that is done, we shall not need to worry about the pre-school or any other pre-period examination.

I am sure many fail to realize what a tremendous thing is going on in the schools of this country today; what a marvelous change has come over the attitude of the educational world in the last ten or fifteen years with regard to health and all that pertains to it. We are growing up a generation of children who know about health, who are enthusiastic about it, as Dr. Koehler has said, much more intelligently, in my judgment, than a good many doctors. I want to tell you that when that generation of young people goes out into the world of affairs as adults, we will have a totally different attitude in this country with reference to public, health, to private health, health examinations and all those things that promote the health and welfare of the community. I wish I could live another twenty-five years to see it. I know it means a revolution in the world of health.

PITKIN'S SPINAL ANESTHESIA

A. Merrill Miller, M. D.,
DANVILLE, ILLINOIS

Strictly speaking one should not use the term spinal anesthesia—spinal analgesia is more descriptive. Some may prefer the term spinal bloc, lumbar anesthesia, or root bloc. In any event, we wish to describe a method of destroying the (protopathic) pain sense by the introduction of drugs into the spinal canal. Historically, it may be of interest to know that an American neurologist, Corning, in 1884, first punctured the canal with a hollow needle, about three years before it was done by Quincke. From that time dates an important era in which this procedure has been used as a diagnostic and therapeutic agent in an ever widening field.

The process of abolishing pain by this practice has been taken up with enthusiasm from time to time, only to be dropped and severely condemned when mortality records mounted. However, patient, careful men who felt confidence continued its use, eliminating danger when possible and improving the technique as experience warranted.

The last three or four years have witnessed a wide general interest in this subject, and painstaking workers seem to have developed it to a point where anesthesia has been satisfactory, consistent with a high degree of safety, when used with discrimination. We should not make an abusive use of any important procedure.

I should like, here and now, to warn you against the attempt of substituting parts of one technique for another in an effort to improve any accepted standard. It may lead to disaster.

All work along this line has been done by surgeons who felt there was much to be desired from the usual forms of anesthesia. Today most often surgeons will have to perfect their technique and personally administer this anesthetic. He should, therefore, be familiar with its reactions and dangers, to be master of the situation. This does not mean an expert anesthetist should have no place in the team. He has a definite function, and to fulfill this must be somewhat of a psychoanalyist.

The method I use and describe was developed by Dr. George P. Pitkin with associates. It is, therefore, known as the "Pitkin Method of Controllable Anesthesia."[1] It is a monumental contribution to medicine. There have been two solutions used by him—the heavy, 40% novocain, and light, 10% novocain. The solution known as Spinocain is the light (1.0005). It is the use of this I wish to discuss. Novocain is one of the cocaine group, and it is common knowledge that these drugs have a selective affinity for sensory nerves. It is a pharmacological fact that in the entire central nervous system the motor mechanism is particularly resistant to anesthesia.

It is known that a marked fall of blood pressure and the inability to control fluids when introduced into the spinal canal led to many

early disasters. This was due largely to the improper understanding of the hydrodynamics of a spinal fluid and the solutions employed.

Practically all pain reducing drugs when introduced into the canal mix and diffuse generally with spinal fluid. The Pitkin solution—spinocain—differs from all others by being lighter in specific gravity than spinal fluid (1.004-7) and remains in fluid mass. The anesthetic substance in spinocain is 10% novocain in combination with strychnine, gliadin (from wheat starch), alcohol and normal saline.

Now, the indications for spinal do not include all operations. It is not generally recommended for work above the diaphragm—at any rate with the accepted technique as practiced. It can be used at any age—none apparently too young or too old. I have used it many times with the most complete success in patients past eighty years. Most of you will agree that this age is not usually considered a prime risk.

One should say in passing that local infections, osteomyelitis, acute inflammation of brain and cord, brain tumor, or tabes, should be excluded. In other words, organic disease of the central nervous system or integument. These can be accepted as reasonable omissions.

The first point in technique is a faultless spinal puncture, done under strict surgical asepsis with the right type of needle. This may sound more simple than it proves to be in practice. The needle of choice was described by Pitkin. It is smaller—usually 20 to 22 gauge, made of flexible rustless steel, 3½ inches long, and has a 45 degree bevel. This is important. It is sharp only on the tip, it cuts a trap door in the dura which prevents seepage of spinal fluid, and does little if any damage if a nerve is touched.

Puncture is always made in the midline with the spine bent forward, the patient lying on his side; never in the sitting position. The site of puncture may vary somewhat but always in a lumbar interspace. These are not always the same width, and by moving up or down one space the introduction should be easy. The rich venous blood supply about a vertebra may stain the fluid if a small vessel has been opened en route. There is less danger of injuring a vessel and spoiling a tap if one adheres strictly to the midline. Even when this is done, and one feels certain he has entered the canal, the fluid coming from the needle may be pure blood. This is practically always due to the fact that you have completely traversed the canal and punctured a vein on the other side. By withdrawing the needle slightly and rotating it in the long axis the fluid will clear after a few drops. While the pressure in the canal is somewhat higher (6-8 m.m.) than in the vein (3-6 m.m.) and no harm will result from this accident, it is best not to introduce spinocain except in a clear fluid. There is some irritation of the meninges when blood is mixed with spinal fluid.

It is possible and practical by the proper choice of an interspace, the amount of spinocain and its expansion, to secure complete surgical anesthesia as high as the diaphragm, lasting 30 minutes to 1½ hours. It is also possible to limit the area of anesthesia to the perineum in case of hemorrhoids, fistula or repair. The tilt of the table is an important point in technique. It is placed in various degrees of Trendelenburg —the number is accurately determined by an instrument known as a tiltometer. After spinocain injection the patient is kept flat or in a moderate degree of Trendelenburg, thus assuring an adequate blood supply to the terminal vessels of the brain. This is maintained for a few hours after the operation is completed. When the patient is returned to his room, a good practical rule is to keep him elevated till sensation and movement return.

One might mention at this time that the usual preparatory treatment is not necessary as with gas or ether. Withholding water, so hazardous or uncomfortable at times, is not necessary. Patients may have food and fluids any time before coming to the operating room. Indeed, water is usually given during the operation. Someone asks—does he vomit? Well, if so, he at least has something to come up, and its presence in the stomach is not the cause.

The blood pressure is previously taken, then at frequent intervals during the operation. This may vary from 10 to 30 points, even more, and requires no special attention, unless it drops markedly, and there develops pallor, cold sweats and air hunger. By increasing the degree of

table tilt with perhaps adrenalin and ephedrin this will return to normal.

Applicability of spinal bloc covers rather a wide field, when we recall that in some cases any inhalation anesthetic is contra-indicated. The hemolysing effect on blood, the irritation of respiratory tract, the possible urinary suppression are at once removed from the list of more important complications. Cardiacs with broken compensation are none the worse after this form of anesthesia,—certainly a matter of much comfort to the surgeon who must occasionally operate on such a case or stand by and witness a demise because of fear.

Technique. Let us assume we have hemorrhoids. You know this requires complete relaxation. We select an interspace—best the 4th. 1 c.c. ephedrin-novocain is introduced by first making a wheal at the site of the proposed puncture, then carrying the remainder of the solution along the tract of the spinal tap. Ephedrin, you know, is a peripheral vascular stimulant. The presence of novocain renders this procedure painless. Perhaps I should have mentioned that a preliminary narcotic, morphine, gr. ¼ or H. M. C. No. 1 is given one hour before. This is not for the purpose of aiding the anesthetic, but to act as a sedative to the patient.

Having introduced the ephedrin-novocain solution, which guards against a fall of blood pressure and at the same time destroys the pain sense, the Pitkin needle is introduced into the canal. Presence of clear spinal fluid is evidence of a good tap. If one feels he has punctured the dura, as recognized by a dull snap, and the spinal fluid does not flow, rotate the needle on its long axis. Occasionally the net-like arachnoid will lie against the opening, and be dislodged by this procedure.

Another Luer syringe containing 2 c.c. of spinocain is attached to the needle after 15 or 20 drops of spinal fluid have been permitted to escape. Aspirate 1 c.c. of spinal fluid, inject 1 c.c. of the mixture, aspirate another c.c. and inject the contents. This is known as barbotage, and we now have a 4 c.c. total expansion. This is a 50% spinocain solution or 5% novocain.

The table is placed in 10 or 15 degree Trendelenburg which causes the solution to rise toward the tip of lumbar spine and bathes the nerve roots with the anesthetic. It requires about 10 minutes for anesthesia to be complete. This begins in the perineum, extends to the legs and finally on the lower abdomen. The patient should be told what to expect, a sense of tingling as if going to sleep, and finally inability to move the toes. It is well to point out these phenomena, at the same time assure him that things are going well. This will inspire confidence and you find your patient following the procedure with keen and intelligent interest.

Go ahead now with the most satisfactory anesthetic you have ever known. A moderate degree of elevation should be maintained for 2 or 3 hours. When movement and sensation have returned to the feet lower the bed.

508 The Temple.

REFERENCE

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OBESITY AND LEANNESS*

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The prevailing conception of obesity and leanness is based on considerations of caloric equilibrium. It is held that obesity is primarily an excess of body fat; that changes in body fat depend on caloric intake and output; that if the caloric intake is excessive, fat is deposited; that if caloric output is excessive, leanness results; and that "normal" body weight simply means a balance between caloric intake and output. Some writers maintain, however, that obesity is due to diminished caloric output rather than to excessive caloric intake. They ascribe the diminished caloric output to low basal metabolism, to diminished specific dynamic action of food, or to decreased caloric production due to insufficient muscular activity.

In this article the author analyzes these ideas in the light of available experimental data and clinical observations. A conception of obesity and leanness is offered that seems to permit a uniform interpretation of the apparently contradictory metabolic and clinical findings reported in these conditions.

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1. *An Analysis of the Factors Concerned in Caloric Equilibrium as Related to Obesity and Leanness*

In the first place it is necessary to analyze the factors concerned in maintaining caloric equilibrium to ascertain if there are striking differences between the "normal," obese and lean subject.

Basal metabolism. Determinations of the basal metabolic rate made by many investigators on a large number of obese and lean persons indicate that in the large majority of cases the variation lies between ±10%, which is the range for normal individuals. Occasional abnormal rates have been about equally divided between high and low values so that it has been concluded that the basal metabolism in these conditions is, as a rule, normal.

A consideration of the definition and mode of calculation of the basal metabolic rate reveals, however, that the statement that basal metabolism is "normal" in obesity and leanness, may be misleading unless all the factors that enter into the calculation are kept in mind. When the basal metabolic rate of obese and lean persons is calculated, the "normal" standards for the patient's sex, age, height and weight, obtained from statistical tables, are simply those of obese and lean individuals. The basal metabolism of an obese person is, in fact, compared with that of another obese person, and the metabolism of a lean person is compared with that of another lean person. A variation of ±10% in basal metabolic rate in obesity and leanness only indicates that in these conditions the basal metabolism of similarly built individuals varies little. And, unless one keeps in mind the fact that by definition the basal metabolic rate is an expression of the number of calories produced per square meter of skin surface, one is likely to be misled. The statement that the basal metabolic rate in obesity and leanness is "normal" means only that per square meter of

TABLE 1

The "normal" weight for the patient's sex, age, and height was taken from tables in Joslin's Treatment of Diabetes, 1928. The 24 hour basal metabolism of the controls was calculated according to the Aub-DuBois Standards. The 24 hour basal metabolism of the patient was determined by indirect calorimetry.

The basal metabolic rates were calculated the usual way according to the Aub-DuBois Standards.

The "basal metabolic ratios" were obtained by subtracting the values in column 5 from those in column 3, and expressing the difference in per cent. of the values of column 5.

No.	Weight of patient Pounds	24-hour basal metabolism of patient. Calories	"Normal" weight. Pounds	24-hour basal metabolism of normal weight person. Calories	Basal metabolic rate	Basal Metabolic "Ratio"	Remarks
1	286	1742	130	1428	—20.8	+22.0	
2	349	2264	129	1405	+ 4.5	+61.5	
3	195	1705	123	1395	+ 1.0	+22.2	
4	292	2170	131	1434	+ 8.3	+52.0	
5	222	1671	136	1505	— 9.3	+11.3	
6	250	2581	133	1439	+37.0	+79.5	
7	203	1810	132	1489	+ 2.0	+31.6	
8	182	1570	125	1350	+ 0.0	+16.6	
9	266	2090	126	1370	+ 3.4	+52.5	
10	228	2160	134	1785	— 8.9	+21.0	
11	240	2180	142	1530	+13.8	+42.5	
12	205	1795	90	1360	— 7.6	+32.0	
13	218	2080	127	1360	+18.7	+49.3	
14	190	1760	121	1340	+ 6.2	+32.4	
15	232	1735	123	1402	— 5.9	+23.7	
16	257	2060	124	1330	+14.1	+55.0	
17	260	2090	126	1386	+10.8	+50.8	
18	226	2000	118	1376	+13.3	+45.4	
19	225	1912	129	1450	+ 3.9	+31.9	
20	183	1625	116	1435	— 6.8	+10.2	
21	178	1400	114	1220	— 2.3	+17.2	
22	265	1920	133	1470	— 0.4	+30.6	
23	264	2370	125	1375	+25.0	+72.2	
23	255	2310	125	1375	+24.4	+68.0	4 weeks later
24	226	1545	124	1370	—13.0	+12.8	
25	252	2150	139	1510	+10.4	+42.4	
25	231	2180	139	1510	+15.0	+44.4	4 weeks later
26	186	1500	114	1350	— 9.9	+11.1	
27	207	1780	120	1330	+ 6.4	+18.8	
28	310	2880	147	1480	+32.4	+94.6	
29	235	2050	150	1820	—15.5	+12.6	
30	287	1890	130	1460	— 6.4	+29.5	
31	185	1640	137	1510	— 4.8	+ 8.6	
32	228	1870	126	1370	+ 5.3	+36.5	
33	193	1640	141	1590	—10.1	+ 3.1	
34	233	1900	118	1280	+ 9.2	+48.4	
35	258	1649	142	1435	—20.1	+14.9	
35	258	1592	142	1435	—22.7	+10.9	1 week later
36	160	....	127	1370	+46.0	.....	9-20-26
36	207	1600	127	1330	— 0.6	+20.0	8-20-27
36	207	2428	127	1330	+60.0	+82.5	1-12-28
36	208	2871	127	1330	+73.3	+116.0	8- 8-28
37	241	2190	130	1368	+ 9.8	+60.1	
38	176	1831	90	1269	+11.4	+44.3	
39	288	2022	134	1494	— 1.6	+35.4	
39	266	3080	134	1456	+57.7	+111.6	1 year later
39	269	2450	134	1456	+23.0	+68.2	1 month later
40	176	1540	116	1079	+ 0.2	+42.7	
41	147	1800	126	1500	— 0.7	+20.0	
42	171	1680	123	1395	+ 5.0	+22.1	
43	217	1972	121	1385	+11.0	+42.4	
44	297	2220	119	1305	+15.0	+70.0	
45	204	1750	117	1288	+ 7.3	+35.9	
46	197	1775	127	1350	+ 8.0	+31.4	
47	200	1554	137	1480	—11.4	+ 4.3	
48	215	2003	119	1305	+20.0	+53.5	
49	184	1134	123	1378	—30.8	—17.7	
50	199	1755	139	1487	+ 2.5	+18.1	

surface the obese, the lean and the average normal weight individuals produce approximately the same number of calories. But, as a matter of fact, the total basal metabolism of an obese person is generally greater than if that obese person were normal in weight; and the total basal metabolism of a lean person is less than if that lean person were normal in weight. Obviously then, the statement of the basal metabolic rate of the obese and lean does not afford a direct comparison with corresponding individuals of normal average weight.

In order to obtain direct information or a comparison between the obese and lean, and the normal weight individual the author believes that the 24-hour basal caloric production of obese and lean subjects should be compared with that of normal average weight persons of the same sex, age and height. When this is done a marked difference is found, obviously. For example, an obese patient weighing 349 lbs. has a total 24-hour basal metabolism of 2,264 calories with a basal metabolic rate of + 4.5; but if this patient were of normal average weight—129 lbs.—the normal total basal metabolism would be only 1,405 calories. The extra weight with increase in body surface has caused an increase in total metabolism of 859 calories, or an increase amounting to + 61.5%. It is suggested that the per cent. increase or decrease in the 24-hour basal metabolism of an obese or lean subject over or under that which would be presumably manifested if the subject were of normal average weight be called the *basal metabolic ratio.*

The metabolic ratios of fifty unselected cases of obesity observed in our clinic are shown in table 1. A study of this table reveals that thirty-one of the fifty cases had a basal metabolic rate within ±10%. There were four cases between —10% and —20% and three cases below —20%; eight cases between +10 and +20%, and three cases above +20%. These findings conform with those of other observers. However, when the basal metabolic ratios are calculated by comparing values in column 3 with column 5, the ratio is positive in all but one, that is, the total calorie production under basal conditions is greater in all but one of the obese patients than it is in corresponding subjects of normal average weight. It is to be noted that the metabolic ratios vary widely, however, from + 3% to +111%, the average increase for 100 lbs. overweight being +30%. This compares well with Lauter's data (-1-) obtained by a similar calculation.

TABLE 2

The data on which the calculations are based have been taken from Benedict and Joslin's paper.[5] For interpretations of columns see Table 1.

Name	Weight of Patient Kgs.	24-hour basal metabolism of patient. Calories	"Normal" weight Kgs.	24-hour basal metabolism of normal weight person Calories	Basal Metabolic Rate	Basal Metabolic "Ratio"
T. M. C...	48.5	1292	62.3	1502	— 4.4	—14.0
Miss J. ...	43.3	1121	53.6	1350	— 9.0	—17.0
Miss A. C.	42.6	1037	62.3	1492	—18.0	—30.0
Miss E. W.	40.5	1247	56.8	1377	+ 3.5	— 9.4
Miss S. C..	37.4	974	55.4	1358	—12.0	—29.3

The metabolic ratio of five healthy underweight or lean subjects as observed by Benedict and Joslin[5] is shown in table 2. It is negative in each case indicating that the 24-hour caloric production under basal conditions of underweight healthy subjects is considerably less than that of corresponding normal average weight subjects.

The fact that a comparison of the basal metabolism of obese persons with that of normal weight persons yields high values for the obese is not new. (Lusk.) Little attention has been paid to this fact, however, because it was explained as due to the larger surface area of the obese. The body surface of obese persons is, of course, considerably larger than the body surface of corresponding persons of normal weight. Thus the surface area of our obese cases recorded in the table varied from 1.88 sq. m. to 2.50 sq. m., while the surface area of normal weight persons within the same height limits varies between 1.4 sq. m. and 1.65 sq. m. It is a well established fact that the basal metabolism of normally built persons is fairly proportional to their surface area, and this relation holds true to a certain extent for persons with abnormal surface areas such as cases of obesity, also. In fact this relationship of body surface to basal metabolism has been expressed mathematically, and it is possible to predict with this formula the basal metabolism of normal persons from the age, sex and body surface. The empirical value of the surface area law is demonstrated by the fact that the basal metabolism of large persons with equally large body surface is quite similarly high whether they are obese or not. Lauter examined the basal metabolism of extremely muscular athletes with body weights ranging between 200 and 320 pounds and surface areas

ranging between 2.1 sq. m. and 2.4 sq. m., and found their 24 hour basal metabolism varying between 1944 and 3005 calories, which is quite comparable with the basal metabolism of obese persons in similar body weight and surface area range.

But while the surface area law is a valuable empirical law for metabolic calculations, it cannot give us any clear information as to the origin of the higher metabolism in obesity. The basis of the relationship of surface area to basal metabolism is not yet clearly understood, and the existing statistical data do not apply to patients with "odd deposits" or "rolls of fat." It has been thought that larger body surface requires higher metabolism in order to maintain the body temperature which otherwise would be lowered by the increased heat elimination through the larger body surface. It is believed by many that the basal metabolism is proportional to the suface area because of some more fundamental factor which is itself proportional to the surface area. Thus, according to Benedict and Talbot,[2] the body surface has no significance in connection with heat production, except that it is normally proportional with the active mass of protoplasmic tissues, and this active mass of protoplasmic tissues determines the fundamental metabolism.

Regarding the question of why obese persons have a higher basal metabolism relatively, the following considerations are suggested. Some part of the excess basal metabolism of the obese may be accounted for as the metabolism in the excess fat tissue; but this part can account for but a fraction of the basal metabolic ratio. It is seen from our table that 100 lbs. overweight is usually associated with basal metabolic ratios around plus 30 per cent. If all of this excess were due to metabolic activity in the excess fat tissue, this fat tissue would be from 1/3 to 1/2 as active metabolically as the rest of the body. This is hardly conceivable. Undoubtedly some tissues developed along with the excess fat of the obese, such as additional interstitial tissue, vessels, skin and subcutis may be metabolically quite active and even the mass of fat cells proper may have, at least at times, some metabolic activity,[3] but it is probably safe to say that the larger part of the observed excess basal metabolism cannot have its origin in the excess tissues.

If we consider an obese person as composed of excess fat tissue and basic tissues, we must conclude from the above that the larger portion of the excess metabolism originates from the basic tissues as an actual increase in their normal metabolic activity. All or only some parts of the basic tissue mass may be involved. Thus the work of the heart is evidently increased in the obese, even at complete rest. And the respiratory movements of the heavier chest require additional energy production in the respiratory muscles; furthermore, obese persons are frequently dyspneic, which necessitates increased work of the respiratory muscles, even at complete rest, and some may even be orthopneic. This extra activity of the heart and the respiratory muscles can easily account for from 5 to 10 per cent. in the basal metabolic ratio of the obese.

Another factor which may contribute more or less heavily to the positive basal metabolic ratio of the obese, representing an increased metabolism in all basic tissues, is the effect of the so-called "luxus consumption." Grafe and his collaborators[4] proved that prolonged overfeeding increases the basal metabolism of most persons; the increase being called "luxus consumption." The increase of the basal metabolism brought about by previous overfeeding is, according to Grafe, less marked in obese than in normal persons, but even so it may be responsible for some portion of the high basal metabolic ratio in obesity, considering that many obese persons are in a state of chronic overfeeding. This factor may possibly account for as much as 20 per cent. in the value of the basal metabolic ratio of certain obese persons.

In other cases the high basal metabolic ratio may be due to increased metabolism in all of the protoplasmic structures because of over-activity of the thyroid gland. Obesity and hyperthyroidism are by no means incompatible, as has been reported by others. We have also observed several forms of this combination, as the following cases illustrate:

Case No. 36: A woman 48 years old who was always overweight. She weighed 225 pounds in 1925. A year later she developed a toxic adenoma with a basal metabolic rate of plus 46 per cent; her weight was then 146 pounds. Thyroidectomy in October, 1926, was followed by marked improvement. In August, 1927, her weight was 207 pounds, pulse 66 and basal metabolic rate minus 0.6 per cent. In January, 1928, she again complained of nervousness, palpitation of the heart, increased perspiration, etc.; a recurrence of the adenoma was found, the pulse was 108 and the basal metabolic rate was plus 60 per cent. Her weight was still 207 pounds. During the following eight months the basal metabolic rates varied between plus 60 per cent. and plus 73 per cent, the weight varied between 200 and 212 pounds. Operation was refused by the patient.

Such cases are of course exceptional. But obese patients with clinical symptoms or signs suggesting some "fruste" form of hyperthyroidism are not so infrequent:

Case No. 38: A girl 16 years old of the adiposegenital dystrophy type. She is extremely short, only 58 inches tall and extremely obese. The sexual organs are in an infantile stage, and she has not yet menstruated. There is present a marked typical fine tremor of the hands, pulse rate between 110 and 120; extremely low sugar tolerance; the patient is highly irritable and nervous. Basal metabolic rate is plus 11 per cent; basal metabolic ratio is plus 44 per cent.

The following case demonstrates that "hyperthyroidism" may cause extremely high increase of the basal metabolism in an obese person without any clinical symptoms:

Case No. 39: A woman 27 years old who had no complaints except of overweight. The physical examination was negative; the basal metabolic rate was minus 1.5 per cent; basal metabolic ratio plus 35.4 per cent. A low caloric diet was prescribed and she was advised to take 3 grains of powdered thyroid gland daily. Instead of reporting weekly as instructed she continued with the diet and thyroid medication, under the supervision of her family physician, for one year. She felt perfectly well all the time. No signs of hyperthyroidism were observed when she was seen at the end of the year, but her basal metabolic rate was plus 53.7 per cent., the basal metabolic ratio being plus 111.6 per cent. A month after she discontinued thyroid gland medication her basal metabolic rate was plus 23 per cent., the basal metabolic ratio plus 68.2 per cent.

It is possible that a "latent hyperthyroidism" as in the case cited is partly responsible for high metabolic ratios of many obese persons, although no clinical symptoms or signs are observed. Hypersensitiveness to orally administered thyroid substance occasionally encountered in obesity may be due to "latent hyperthyroidism."

Specific Dynamic Action of Foods. The specific dynamic effect of foods usually plays but a small part in the 24 hour total caloric output. It amounts, under normal feeding conditions, to about 200 to 400 calories in 24 hours The majority of normal persons respond to protein meals with a 12 to 19 per cent. increase in their basal metabolism. The specific dynamic effect of meals containing only carbohydrates or fats is considerably less.

Plaut,[6] Grafe,[4] Strouse[7] and recently Bernhard[8] claim that the specific dynamic effect of foods is usually abnormally low in obesity. Thus they hold that a saving in oxydizable body materials results which must lead in time to considerable fat deposition. They consider the low specific dynamic effect to be a primary characteristic and an important etiologic factor in obesity.

On the other hand, in a large number of *normal* persons Benedict and Carpenter[9] found the specific dynamic effect in several instances as low as 3%, and as high as 33%, and Lauter's careful tests on *obese* persons resulted in the finding that the specific dynamic effect of foods varies just as widely in the obese as in the normal. The question as to whether the specific dynamic effect of foods is abnormally low in most cases of obesity is therefore not yet settled. Apparently it is normal in a number of cases, and in some cases it is even high. Furthermore, even in cases where it is definitely low the question remains as to its *etiologic* importance. Many obese persons habitually overeat and become accustomed to big meals including large amounts of protein. It is reasonable to expect that a large test meal consumed by such persons will stimulate their basal metabolism to less extent than a similar test meal ingested by normal weight persons with moderate eating habits. In these cases the low specific dynamic effect may not be a primary characteristic, but merely one of the consequences of chronic overeating.

Muscle activity. The muscle activity constitutes a variable but important part in the 24-hour caloric output; it may equal or even considerably surpass the basal caloric production. Unquestionably, any normal person will deposit fat, if his usual muscular activity is decreased without the food intake being decreased. Therefore, the question whether or not the caloric production derived from muscular activity is diminished in obesity must be considered.

Theoretically, this might be a factor because of one or both of the following possibilities:

1. Physical work is known to increase the basal calorie production in every normal person during the time of actual work and also for some time (15-30 minutes) after the work was done. This increase during and after physical work may be called the "specific dynamic effect of muscular activity." It might be possible that this specific dynamic effect of muscular activity is diminished in obesity. Obese persons, then, would be able to perform the same amount of physical work with the expenditure of fewer calories than normal persons.

2. Because of an habitual inactivity, obese persons might generally perform less physical work in their everyday life than do normal persons, thereby saving a certain amount of calories in their 24 hour total caloric output.

As to the first possibility: metabolic experiments made on the "specific dynamic effect of muscular activity during work" do not indicate a reduction of this effect in obesity. On the contrary, all investigators agree that the majority of obese persons show a definitely greater increase of their basal metabolism during muscular exercise than do normal persons performing the same amount of work. Furthermore, it is agreed that the "specific dynamic *after effect* of muscular activity,"—noticeable in the rest period immediately following the work—is also somewhat higher in obese than in normal persons, if the work done was sufficiently hard to require noticeable effort[1], [8], [10]. However, Bernhardt[8], who recently studied the after effect of *slight* work on the basal metabolism of normal and obese persons, found that under such conditions the "after effect" was frequently considerably less pronounced in the obese than in normal persons. In some obese cases the after effect was negative, that is, the increase of the basal metabolism during work was followed by a decrease in the rest period below the control level of the basal metabolism. In several cases the negative phase in the rest period nearly equaled the previous positive phase in the work period; accordingly work was done by these obese subjects without any appreciable final increase of their basal metabolism. Bernhardt is inclined to attribute great importance to this phenomenon in the genesis of obesity. It will be necessary to await the results of confirmatory experiments before correctly evaluating this peculiar behavior. It will be noted, however, that only less than half of the obese persons examined exhibited this behavior in Bernhardt's experiments, the rest of them responding in a way not different from the normal. The "negative phase" seems to occur only in obese persons with unusually high basal metabolic levels.

As to the second possibility: do obese persons habitually perform less physical work in their everyday life than normal persons? By its nature this question does not lend itself to experimental investigation, and therefore, in trying to answer it we will have to be satisfied with estimations based on everyday observations. The fact that an obese person has to move a greater weight with every step he makes indicates that, other things being equal, the obese would perform more physical work in his everyday life. On the other hand, it cannot be doubted that many obese persons more than compensate for this excess of work by what they save by their lack of impulse to muscular activity. Frequently, of course, the "laziness" of the obese is chiefly secondary, being simply due to the effect that overweight would have on the activity of any normal individual. In other cases, however, the laziness is evidently a primary, genuine characteristic. But it should be kept in mind that not all obese persons are physically inactive. Quite a few of them show remarkable muscular activity although greatly handicapped by their excessive weight, shortness of breath, profuse perspiration, etc. It is well known that some of the wrestling champions who certainly have plenty of exercise possess not only powerful muscles but excessive fat deposits as well. It is a fact that many normal individuals who have been accustomed to strenuous physical work gain weight later when they settle down to a more quiet life. But even complete lack of physical exercise does not always result in obesity. Some children, for instance, forced to inactivity by infantile paralysis or by organic heart disease will become obese, others will not. There is a class of constitutionally *thin* persons, the asthenic type, who are characteristically inactive with lack of impulse, and fatigability. Among *normal weight* persons we find some physically extremely active as well as some extremely inactive types. Evidently there is no parallelism between bodyweight and amount of muscle activity as far as different persons are concerned, although there is a parallelism, to a certain extent, between these two features, in the same individual.

Accordingly there is no evidence that the calorie production derived from muscle activity would be generally reduced in obesity.

Food Intake. The common idea that in obesity there is an increased consumption of food, and in leanness a diminished consumption of food does not hold true for a number of cases in both

groups. It is true that a large number of lean persons have a poor appetite, eat little and prefer foods low in carbohydrate and fat content; but another class of lean persons is conspicuous for its excellent appetite; others again do not differ in their eating habits from the majority of normal weight persons. Similarly, many obese persons are characterized by increased appetite and food intake. This is in accord with the higher basal metabolism of these persons mentioned above which calls for more caloric intake. But a number of obese persons apparently have no abnormal eating habits, and some of them eat surprisingly little.

Relation of Food Intake to Exercise. Regardless of the absolute amount of food intake and muscular exercise it might be possible that the difference between these two factors is a constant characteristic in obesity and leanness. We should expect then to find always a relative excess of food intake over muscular activity in obesity and a relative excess of muscular activity over food intake in leanness.

Experimental data concerning this relation in obese and lean persons are not available, evidently because of the technical difficulties inherent in such experiment. However, common observations offer sufficient evidence to show clearly that the expected discrepancy between food intake and exercise is not necessarily present in obesity and leanness. Thus it is a common observation that many lean persons, with poor appetite and little food intake, are very inactive at the same time. In contradistinction to these "asthenic leans," another lean type, the "hypersthenic lean," characterized by overactivity, is frequently a good or even excessive eater. No discrepancy is evident between the eating and exercising habits in these lean individuals. Similarly, obese "big eaters" are frequently quite active, while a number of obese persons, of the inactive, lazy type, justly claim moderate eating habits. In other cases of obesity a relative excess of food intake over muscular exercise is of course quite apparent on everyday observation. It may be objected at this point that a slight difference in the balance might not be detected on simple observation, and that such slight discrepancy may yet be present in all cases, resulting in time in considerable gain or loss of weight. This matter will be considered later and it will be shown that such is not the case.

Summary. Having compared the factors of the caloric intake and output in obesity with those in normal weight persons, we have found only one factor which shows a uniform anomaly in practically every case of obesity, namely, the total basal metabolism. But the abnormal values of the basal metabolism observed can hardly be considered as of etiologic importance, since this anomaly consists in an elevation and not in a decrease, as might have been expected, of the basal metabolism. We find that the basal metabolism of obese persons when compared with the basal metabolism of average weight persons is usually high. This, we believe, is partly due to the metabolism of the excess fat tissue and additional interstitial structures, partly to an increase in the work of the heart and respiratory muscles, partly—in some cases—to luxus-consumption on account of previous over-feeding, or —in other cases—to a latent hyperthyroidism. In order to obtain a true comparison of the basal metabolism *of the basic tissues* in obese and normal weight persons, the first three factors would have to be eliminated; or estimated and substracted—a task which cannot be performed with satisfactory accuracy.

The other factors of the caloric equilibrium—the specific dynamic effect of foods and of muscle activity, the amount of muscle activity, and the food intake—do not show uniform changes in obesity; in the majority of cases abnormal values were found, to be sure, in the expected direction, but in a number of cases the values of these factors were just normal, or showed a change in the opposite direction. Even the relation of food intake to muscle activity does not seem to be uniform. These findings must bring up the question: Does the caloric equilibrium have to be disturbed in obesity? Or is it possible that in certain cases or in certain phases of obesity the values of all caloric factors, including their balance, may be entirely normal?

2. *Observations on the Nature of Obesity*

It is a common observation that the body weight of many normal adult persons remains fairly constant for many years in spite of the fact that both the caloric intake and output varies extensively under everyday conditions. It is also a common observation that periods of

incidental loss or gain of weight in these persons—due to disease, undue strain, or inactivity—are soon followed by periods in which the weight is more or less automatically restored to the previous level. Furthermore we know from clinical and experimental experience that such persons (and healthy normal animals as well) can be easily made to lose or gain weight by artificial means—such as starvation and increased exercise, or overfeeding and limited exercise—but that these alterations from the normal weight will stop and restoration of the previous weight will follow as soon as the subjects are not interfered with in their instinctive eating and exercising habits, if the loss or gain of weight did not exceed certain limits.

In these same respects obese and lean persons show the following behavior:

1. The body weight of obese persons is usually considerably above, and that of lean persons considerably below the normal average. But overweight is evidently neither a necessary nor a pathognomonic characteristic in obesity. *There are obese persons who are not overweight,* and there are *overweight persons who are not obese.* The first group might be called "masked obesity" and comprises persons who maintain a normal or slightly over-normal weight by artificial means, that is, by living on a restricted diet and forced exercise, resisting constantly their natural eating and exercising impulses. These persons in spite of their normal weight, must be classified as masked or larvaceous obesity for the same reason as diabetics who have no glycosuria on a low carbohydrate diet are classified as diabetics. As soon as the voluntary or artificial restriction as to diet and exercise is removed these normal weight obese persons will immediately gain weight, thereby demonstrating the presence of the anomaly. The second group might be referred to as "pseudo-obesity" and comprises overweight persons who are not essentially obese. These persons became overweight because of forced overeating and limited exercise. That they are normal persons is manifested by the fact that as soon as they live again according to their "instinctive" habits they lose their excess weight in a short time. These persons may manifest all the *clinical* symptoms of obesity, but, from the pathologic point of view must be distinguished from essential obesity. To classify such normal persons in the stage of overweight as obese, would be as incorrect as to classify the polyuria of the beer drinker as diabetes insipidus, or the high temperature caused by a high frequency current as fever.

Similarly we must distinguish between underweight and lean persons. Lean persons are of course usually underweight. But lean persons may keep themselves near to normal body weight on a forced regime of feeding and rest. On the other hand normal persons may be underweight on an artificial regime of low caloric feeding and increased activity.

2. It is a common view that obese persons are characterised by a "tendency to gain weight." By this is meant that in these persons even occasional overeating or inactivity will result in a gain of weight, necessitating constant attention in order to prevent further fat deposition. *This statement needs an important correction.* All obese persons have gained weight over a more or less extended period of their life. There is, however, a limit to the gain in weight even in extreme cases. Clinical observations show that after a high body weight is reached which is individual and which may be moderately, markedly, or extremely high, a phase is entered in which the high body weight is maintained practically automatically. There is a period in which the tendency to gain weight is very marked—we may call it the *dynamic phase* or period of obesity—and there is a period in which there is no tendency to gain weight, which might be called the *static phase.* It is frequently observed that obese persons who find themselves unable to prevent further gain at say 180 pounds body weight maintain with ease their body weight at 220 pounds. No tendency to gain is present at this time and at this weight. But if the weight of this person is reduced by restricted diet, etc., considerably below 220 pounds, the tendency to gain immediately reappears. It seems then that the tendency to gain weight is not a characteristic of obesity in general, but only of one of its phases, the dynamic phase. The dynamic phase may be of short or long duration and represents the period in which the body weight of the obese persons is below his individual abnormally high level.

Similar considerations are valid as to the tendency to lose weight in leanness. This tendency to lose weight is present only when the body weight of the lean is temporarily above his in-

dividual abnormally low level, such as after a successful attempt to gain weight. In this dynamic stage of leanness consistent efforts have to be made in order to maintain the additional weight, such as by continued forced eating and rest; even then the tendency to lose in this period will finally result in most cases in the restoration of the previous low weight. But as soon as the static phase of leanness is reached no more tendency to lose is observed, and the weight will be maintained automatically without any particular effort.

3. Another common observation is the resistance of the obese to lose weight and the resistance of the lean to gain weight. By this is meant that the response of obese persons to low caloric diets and forced exercise would be different from that of normal persons inasmuch as the loss in weight would be smaller in proportion than the calculated caloric deficit, or that it would be accompanied by subjective symptoms of discomfort much more marked than in the normal person.

As to the objective response there is no doubt that any obese person will lose body *fat* on a low caloric diet exactly according to the caloric deficit, if proper supervision insures the strict observance of the diet. The loss in weight is of course not a true index of the loss in body fat, because the weight includes also the changing water content of the body. The loss of body fat is accompanied in some cases by increased water elimination, in other cases by water retention; thus the scale may show an amazing loss of weight in one case and little or no loss of weight in another on the same low caloric diet, although the actual loss of body fat might have been the same. If the fluctuations of the water equilibrium are determined and calculated, it can be shown that the loss in body fat corresponds in every instance exactly to the calculated caloric deficit.[11]

Neither is the subjective resistance of obese persons to continued low caloric diets in any way different from that of normal persons. It is true that a number of obese persons find it difficult to follow dietary restrictions; they soon complain of hunger, weakness, dizziness, restlessness, headaches, insomnia, etc. But many obese persons have no difficulties on such a regime. We observe similar differences in response to caloric underfeeding in normal weight persons; some of them can stand it remarkably well for a long time, others are quite distressed. The peculiar feature of obesity is only that symptoms of caloric underfeeding may appear at a stage when their body fat content is still well above the average normal. Apparently the obese is just as sensitive to reduction in his abnormally high body fat content as the normal is to reduction in his normal body fat content. Similar considerations may be applied to the question of the resistance to gain in weight of the lean person.

These general observations indicate that a delicate and sensitive mechanism regulating the fat content of the body must be working in *normal* persons, that this mechanism is capable of automatically controlling the impulses for caloric intake and the factors of the caloric output, and that the operation of this regulating mechanism is governed by the existing fat content of the body—a mechanism that might be compared to the body heat or water-volume mechanism. In the healthy person of average weight this body fat controlling mechanism automatically tends to maintain a weight which is normal for the person's age, sex, and height. The normal fat content of the body represents the zero point, the normal level, or threshold of the mechanism controlling fat deposition. Factors disturbing fat deposition set the regulatory mechanism to work, resulting in change of appetite or in muscular activity—and possibly other factors concerned with the caloric intake and output—and these changes will restore the normal fat content if not interefered with. This mechanism is probably set at a certain level genetically (hereditary obesity or leanness or normal weight), which may be influenced or changed by hormonal (endocrine obesity or leanness) or nervous (lipodystropia, e. g., Dercum's disease, etc.) influences.

In *obesity* and *leanness* the level of the fat content regulating mechanism is represented by an abnormal fat content of the body. In obesity the level is abnormally high; in leanness it is abnormally low. The operation of the regulatory mechanism in obesity and leanness is no less efficient than in normal persons; it is adjusted only at a different level. The mechanism tends to maintain the "abnormal" level in obesity and leanness just as rigorously as the normal fat level is maintained in normal persons. Incidental or artificial changes brought to bear on the me-

chanism in obesity and leanness will call forth just as efficient operation of the mechanism as occurs in normal persons, so that it is as difficult to permanently influence the body weight of the lean and obese subject as it is the body weight of the "normal weight" subject.

In this connection it is worth while to compare the body fat content regulation with body temperature regulation. Normally the body temperature is extraordinarily uniform. Violent exercise or extremes of environmental temperature cause transient deviations which are quickly rectified when normal conditions again prevail. In febris continua "the temperature regulating mechanism of the body apparently maintains this higher level as jealously as it maintains the lower level of normal individuals."[12] We shall see later that the analogy between temperature and fat content regulation can be extended further.

While the nervous centers and tracks of temperature regulation have been known for some time, experimental evidences of a central regulating mechanism for metabolic processes were not available until recently. Grafe and Gruenthal[13] found that injury to certain parts of the hypothalamus in the dog is invariably followed by a marked drop of the basal metabolism. Bernhard and Zondek[8] noticed that the basal metabolism of certain cases of obesity was markedly lowered after a lumbar puncture and removal of spinal fluid. Direct experimental proofs that the "metabolic center" in the hypothalamus controls other or all single factors of the total caloric intake and output,—such as the specific dynamic effects, etc.—are lacking yet, but that this center has a profound influence on the caloric metabolism as a whole is strongly suggested by P. Smith's findings in rats on the "tuberal syndrome."[14] This investigator proved that injury to the tuber cinereum in the rat is regularly followed by the develpment of a marked or even extreme obesity. Aschner and others have described cases of "cerebral obesity" in which brain tumor or encephalitis or other brain pathology was found in connection with a rapidly growing obesity. Zondek[15] described the so-called hypophyseal-cerebral-peripheral type of obesity. The importance of central nervous system pathology was fully recognized by Bernhard, who makes it the basis of his classification of obesity.

There is also some experimental evidence concerning the controlling of the mobilization and deposition of fat by hormonal-nervous factors. Coope and Chamberlain[16] found that pituitrin causes an accumulation of fat in the liver. Raab[17] noticed that injections of pituitrin are regularly followed by a decrease of blood-fat, which, however, does not occur if the infundibulum or the tuber cinereum is previously destroyed or the spinal cord severed anywhere above the 6th cervical segment. Wertheimer[18] found that the accumulation of fat in the liver observed in phloridzin poisoning does not occur if the spinal cord is severed above the 7th dorsal segment; he also found that insulin inhibits the formation of fat liver in phloridzin poisoning, and promotes the disappearance of fat from an already fatty phloridzin-liver. Rony and Ching[19] have shown recently that the passage of ingested fat from the blood into the tissues is greatly promoted both by insulin and by administration of carbohydrates, and conclude that the fat transport depends on the state of carbohydrate metabolism going on in the tissues. especially in the liver.

This discussion shows that other factors may operate in the body than caloric intake and output which are concerned in the etiology of obesity and leanness and that an imbalance of caloric intake and output is secondary to a more prime cause.

3. *Interpretation of Data Concerning Caloric Equilibrium Based on a Revised Conception of Obesity and Leanness*

It has been pointed out by an analysis of the available data on the caloric equilibrium in obesity that a lack of uniformity exists. Part of this lack of uniformity finds its logical explanation we believe in the conception set forth that the caloric equilibrium in the dynamic phase must be necessarily different from that in the static phase. In the dynamic phase, when the body fat content is below its "abnormally" high level, or when actual fat deposition is taking place, the caloric balance *must be positive,* otherwise no fat deposition would be possible. In the static phase of obesity, when the abnormal high body fat content is reached, and the body weight is maintained at a high level, the caloric intake and output *must be in balance,* otherwise the weight would not be maintained. Therefore examination of the caloric balance may show different results not only in different cases but even in the same case depending on the phase during which the tests were carried out.

The lack of uniformity in the values of the *single* factors concerned in maintaining caloric equilibrium in obesity is also what one would expect. If for some reason a high body fat threshold or level is established in a previously normal weight person, and the body fat controlling mechanism strives to store fat in the tissues, this may be done in different ways. In some cases an increased appetite will appear causing increased food intake, the other factors remaining practically unchanged. Or the food intake is increased and at the same time some or all of the factors concerned in caloric output are reduced. In other cases the food intake may

not be increased, and the amount of urge to muscular activity or "the specific dynamic effect of muscular activity" may be reduced. In still other cases the method used by the body to insure fat deposition may be a relative reduction in basal metabolism or a lowered specific dynamic effect of foods, etc. Finally, in the static stages, all metabolic factors may be at a "normal" or a basic level for the individual concerned.

We have seen that anomalies of these single factors may be occasionally found in normal weight persons. The body fat regulating mechanism evidently prevents excessive fat deposition in these normal persons automatically by vicarious adjustment of some or all of the remaining factors. Thus persons with low basal metabolism are frequently of normal weight or even lean because the deficit in the caloric output is balanced by a reduced food intake; even myxoedemas are usually not obese. On the other hand, in occasional cases of obesity with extremely high basal metabolism the food intake is apparently sufficiently increased not only to cover the excess of the basal metabolism but also to supply calories for storage. Similarly follows the interpretation of the fact that normal or even lean persons were found to exhibit low specific dynamic effect of food, or low muscular activity etc., and that obese persons were found with normal or even high values for these factors.

It may be instructive to cite here again the analogous phenomena observed in the caloric equilibrium in fever. If the heat regulating mechanism is *suddenly* established at a higher level than normal the method of producing extra heat quickly is by means of muscular action; some involuntary mechanism causes the patient to shiver until he has produced a large number of extra calories. Under ordinary conditions of health these extra calories would be eliminated through the skin. but an additional mechanism prevents this during the chill. There results an excess of heat production over the heat elimination in this period,—chiefly due to the muscular action during the chill—with a consequent storage of heat in the body due to absence of sweating. After the temperature has established itself at its high level the chill ceases; now the *basal* metabolism is usually increased mainly as a *result* of the high temperature, according to van't Hoff's law. A high level of body temperature is established, the heat elimination being so adjusted as to equal the production. When the body temperature rises *slowly* there is no chill or other muscular activity to produce the extra calories necessary to warm the body. The rise of temperature is then caused chiefly by a failure of normal heat elimination.[12]

The phenomena of dynamic and static stages and the ability of the body to procure calories for storage *in different ways* in obesity have thus striking analogies in the control of body temperature in fever. But while the choice of methods used for controlling body temperature in fever is related to the *rate* in the change of the temperature level, no such simple rule is known to exist in regard to the choice of the different methods available for fat storage in obesity. Just why fat deposition is procured chiefly by increased food intake in some cases, and chiefly by reduced muscle activity, etc. in other cases, is not yet clear. But it should be clearly understood that the observed changes of the metabolic factors in the dynamic stage of obesity are not causes of but merely methods for the resulting fat deposition, in the same way as the chill is not a cause of the fever but only a means for extra heat production. The cause of fever is something altogether different. It is important to realize this since it will enable us to reduce to its due value the heretofore exaggerated importance of the study of the caloric equilibrium in obesity and leanness.

This criticism should also be applied to the interpretation of the results obtained by us on the "sugar tolerance" and "fat tolerance" of obese persons.[20] The sugar tolerance of 70 obese persons was examined. Each received 120 grams of glucose in 500 cc. water in the morning on an empty stomach. The blood sugar was determined before and at hourly intervals after the glucose meal for three hours; simultaneously samples of urine were collected and tested for sugar. It was found that 44 of the 70 showed a "normal" sugar tolerance, 16 exhibited an abnormally "low," prediabetic, sugar tolerance, and the remaining 10 showed a definitely "high" sugar tolerance. The "fat tolerance" of 18 obese and 8 normal weight healthy persons was tested by studying the effect on the blood plasma lipids of the administration of a pint of 20 per cent. cream. The total fatty acid content was increased in the normal subjects and a fairly uniform curve resulted, a maximum content being reached from three to five hours after the meal of cream. Seven of the obese subjects gave a "normal" response, five showed a "high" fat tolerance, the fatty acid content of the blood de-

creasing after the meal, and six showed a "low" fat tolerance, the increase of the fatty acids in the blood being higher than the highest in the normal cases. The subjects showing high fat tolerance had high sugar tolerance also, and those showing low fat tolerance had low sugar tolerance also. According to these results obesity is not infrequently associated with an abnormally fast removal from the blood of ingested sugar and fat. This phenomenon may also be one of the numerous factors the body fat regulating mechanism employs to promote fat deposition. But that it is not a causal factor is indicated by the fact that in many obese cases the rate of transfer of sugar and fat from the blood into the tissues was found normal and in others even abnormally slow.

A similar lack of uniformity characterizes the results of studies on the energy derived from the various basic foodstuffs and on the respiratory quotient in obese and lean subjects as compared with normal weight persons. Wang and Strouse[21] found that the majority of obese subjects derive less energy from ingested fat than normal or thin individuals which they believed to be the reason for excessive fat storage. Hagedorn, Holton and Johansen[22] found that obese subjects have lower post-absorptive respiratory quotients after two days of a diet consisting chiefly of carbohydrates than normals, which they believed was due to excessive conversion of carbohydrates into fat. However, 18 per cent. of the obese cases of the former and 41 per cent. of the latter either reacted as normal subjects or in an opposite direction. Two of the obese cases of the latter authors, for instance, had higher respiratory quotients than any of the examined normal subjects. Evidently increased transformation of carbohydrates into fat or decreased utilization of ingested fat by the obese may be one of the methods the "body fat regulating mechanism" uses in increasing body fat. However, such data, although very valuable, do not answer the question of what causes the increase in transformation of carbohydrates into fat, etc., and hence do not bear directly on the prime etiologic factors concerned in obesity.

4. *The Question of Exogenous or Endogenous Origin of Obesity*

Another view concerning the problem of obesity and leanness which has been argued pro and con is expressed in the clinical classification of obesity into exogenous and endogenous groups. Ever since Noorden introduced this classification it has been the source of much confusion. No agreement has been reached as to the characteristic criteria of each group, and therefore it has proved of little value in practical diagnosis. In the recent literature there is a tendency to omit this classification altogether, and the physiological problem as to the fundamental origin of obesity,—whether it is exogenous or endogenous —still exists. Lauter, for instance, attributes obesity chiefly to exogenous factors; and Newburgh and Johnston[11] call endogenous obesity a "misconception." Bernhardt, on the other hand, considers obesity chiefly endogenous in origin.

It seems to us that the conception of obesity and leanness as faulty adjustments of the body fat regulating mechanism tends to eliminate this confusion. We pointed out the fundamental difference between artificial fatness or pseudo-obesity and essential obesity. Artificial fatness with its purely exogenous origin is easily produced in experiments and in live stock farming, provided genetically fat animals are used. We believe that artificial influences *promoting* marked fat deposition are seldom encountered in human obesity clinically. Persons who became fat after they forced themselves to overeat and to live a sedentary life because of a fear from a suspected tuberculosis, and continue on such forced regime indefinitely, belong to this group; fatness developed after a paralysis of the legs, etc., belongs to a certain extent to this category. These cases in pure forms do not show excessive grades of fat deposition, however. In the overwhelming majority of our obese patients artificial factors if present tend to *inhibit* fat deposition rather than promote it. These patients in order not to be obese report that they have been limiting food intake and have been exercising. But the spontaneous impulse or urge to overindulgence and inactivity is usually stronger than all artificial influences. These spontaneous impulses are always endogenous whether they are associated with some manifest endocrine or nervous system pathology or not.

Of course, the endogenous disturbance of the body fat regulating mechanism in obesity can be influenced to a certain extent by exogenous factors. The situation in this respect seems to be similar to that in diabetes. The underlying disturbance of the carbohydrate metabolism in diabetes is unquestionably endogenous but we know that the degree of the disturbance depends to some extent on certain exogenous factors, such as food intake. Thus it has been observed that the sugar tolerance of diabetics may be considerably improved after a continued regime of die-

tary restriction and again aggravated after continued overindulgence in carbohydrates. It is generally assumed that overindulgence in carbohydrates constitutes undue strain on the already deficient insulin production causing additional exhaustion of the islets. This additional exhaustion can be relieved by continued low carbohydrate diet. Such observations demonstrate how an exogenous factor may actually influence an underlying endogenous disturbance.

Similar phenomena can be observed in obesity, when attempts are made to reduce weight. Some obese persons after living on moderately low caloric diet for a prolonged time with considerable loss of weight can remain around this so attained lower level indefinitely without effort. (At this stage in such patients who are still overweight, a further attempt to reduce the weight is usually promptly followed by appearance of tendency to gain.) Either a new lower level of the fat regulating mechanism was established; or this lower level may correspond to the basic level of the fat regulating mechanism of such a patient which basic level has been previously aggravated by overindulgence, and then restored after prolonged "underfeeding" to its basic level. This basic level cannot be further reduced by exogenous influence.

That artificial influences *alone* do not produce a *lasting* change in the fat content regulating mechanism is sufficiently proved by the fact that lean persons return sooner or later to their previous weight when "spontaneous" conditions or response to "normal" urges are resumed, even after years of artificial feeding and rest.

We find then that artificial fatness, which is purely exogenous in origin, is rarely encountered in the clinic. We believe most cases of human obesity are basically cases of essential or endogenous obesity and that the underlying disturbance of the body fat content regulating mechanism may be modified to a certain extent by exogenous factors.

SUMMARY

1. The basal metabolic rate is not an appropriate measure of the basal metabolism in obesity. The use of the "basal metabolic ratio" is suggested. The ratio is almost invariably high in obesity, the average increase being plus 30% per 100 lb. overweight; the increase, however, varies extremely in individual cases. The "basal metabolic ratio" is low in leanness.

2. The other factors of the caloric equilibrium,—such as food intake, specific dynamic effect of foods, amount and specific dynamic effect of muscle activity—do not show uniform alterations in obesity. Neither is the balance between caloric intake and output always disturbed.

3. These facts and certain clinical observations necessitate a revision of our conception of obesity. The chief points of this new conception are: In normal persons the body fat content is automatically maintained by a regulatory mechanism which is adjusted to a threshold represented by the normal fat content of the tissues. In obesity and leanness this regulatory mechanism operates with normal efficiency, only it is adjusted to an abnormally high fat threshold in obesity, and to an abnormally low fat threshold in leanness.—Obesity is not synonymous with excess weight: obesity may be present without excess fat content, and vice versa.—It is necessary to distinguish between the "dynamic" stage and the "static" stage of obesity. In the dynamic stage one or several factors of the caloric equilibrium are of abnormal value, and the caloric balance is necessarily disturbed. In the static stage all caloric factors may be of normal value, and the caloric intake and output are balanced. —Anomalies of caloric intake or output in obesity or leanness have no basic etiologic importance; they are merely means used by the disturbed body fat regulatory mechanism to insure establishment of an "abnormal level." Accordingly the study of the caloric metabolism although of value will not solve the question of the basic causes of obesity.—Human obesity is basically endogenous but the underlying disturbance of the fat content regulating mechanism may be aggravated or improved to a certain extent by exogenous factors.

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COMPENSATION FOR INJURIES OF THE EYE*

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The question of compensation is one which arises more and more frequently to the physician and surgeon of any type during the last few years. While workmen's compensation does not yet apply to practically the whole population here, as it does in some parts of Europe, still there are few injured persons who, if they do not come under the law, do not have disability insurance and who do not produce a pocket full of papers for the doctor to fill out. It is then that his position changes from the normal one of healer to that of referee between an interested claimant and an equally interested employer or insurance company. In this position he cannot accept without question the patient's statement as to the history of his injury, his symptoms, or the resulting visual disability, unless the evidence bears this out. Sometimes the actual facts, to which he may be called upon to testify in court, are difficult to arrive at.

The most common offender is the one who wishes his time of disability extended long after it should be, especially if he is claiming partial temporary disability for some minor injury. In his case all that is necessary is a strict adherence to facts, although this will mean every now and then losing a good patient and his family.

Then there is the patient who complains of symptoms of irritation of the eyes which prevent work long after all objective evidence of the injury has disappeared. Here a nervous element is very often present; the patient is not wilfully deceiving, but once his attention has been called to his eyes, notices and magnifies slight symptoms of fatigue or eye-strain which were never noticed before. This is often due to a refractive error which was present before, but was not great enough to necessitate the wearing of glasses. Although the accident did not cause the refractive error, the quickest way to get such a case back to work may be to provide him with proper glasses. In most cases we must make it plain to the patient that there is no longer any evidence of disease, that a report to this effect will be made, and that disability will not be paid afterwards.

Worst of all is the real malingerer who deliberately misrepresents his disability.

After an eye injury such a person has peculiar advantages, since all of our tests of vision are based on his statements of what he sees. An encounter with a representative of this type may prove a battle of wits in which his native cunning will make it seem that our years of medical training were passed in the kindergarten.

Before I go into some of our methods for dealing with such cases, it may be best to mention the main points of an examination of the eye as it affects compensation cases. The patient's history of his case must be recorded for what it may prove to be worth. External examination of the eyes and lids should be made in good light, usually with the binocular magnifying glasses, and the presence or absence of wounds or scars noted, especially as to whether or not they could have been caused in the manner stated. It is specially important to distinguish old scars of the cornea which must have been present before the injury from wounds, abrasions, or fresh scars which could have been caused at the time stated. The presence of previous disease does not excuse the employer, under the Illinois law, from paying disability due to an injury which caused further damage to the diseased eye, but this does not mean that a patient with poor vision from a birth infection can collect for this if he gets a cinder in the eye later. In other words, the evidence of injury must be sufficient to account for the disability claimed. The question of the freshness of such evidence is often not easy to decide,

*Read by invitation before the Chicago Claim Society.
From the Department of Ophthalmology, Northwestern University Medical School.

and here a relatively new instrument, the slit-lamp corneal microscope, gives information which may be of the greatest value. This instrument throws a fine beam of light through the transparent parts of the eye, so that with the microscope we may exactly locate the level of any lesion, determine whether an injury has penetrated the cornea or not, and the presence or absence of cells around an opacity of the cornea which if present would indicate a relatively fresh lesion. With this instrument we are able to see the fine deposit of iron oxide which collects in every eye that contains a piece of steel. Thus even if the steel has absorbed or if the x-ray picture leaves us in doubt as to whether it is in the eye or just outside the eye, we can find reliable evidence as to where it has been with the slit-lamp.

After every injury which involves the remotest possibility of any foreign material being in the eye, x-rays should be made. This will show the presence of most metals and some kinds of glass. The pictures should be taken by one of several special methods which will localize the foreign body accurately. For if a piece of metal has penetrated the eye and gone beyond it, it will seldom be necessary to remove it, as it will do no more harm if left alone. If it is shown to be in the eye, and is magnetic, a prompt effort should be made to remove it. If it is a fragment of steel or iron our giant magnets will usually remove it, but the removal of pieces of glass, copper or lead is very difficult and often involves more danger to the eye than leaving them alone. Small fragments of this kind may remain in eyes for years with retention of good vision.

Besides these external and x-ray examinations the inside of the eye must be examined carefully with the ophthalmoscope, and careful notes made of any evidences of injury found. An eye which looks perfectly normal externally may show hemorrhages or tears in its inner coats which will account for great loss of vision or even blindness. In such an examination it is usually necessary to dilate the pupil.

In all cases, the amount of vision of both eyes should be carefully recorded. This is a matter in which medical examiners may be blamed for causing much confusion among claim adjusters. For there unfortunately exist a number of methods of recording vision, the results of which may look entirely different and mean exactly the same thing, or vice versa. The results are usually expressed as fractions and it would be easy if these fractions really meant fractions of vision. But they usually do not. The standard way of recording vision is by the use of a test chart, the letters of which are read by the normal eye at various distances. The numerator of the fraction is the distance at which the test is made, usually 20, for 20 feet, while the denominator is the distance at which the letter can be distinguished by the normal eye. Thus vision of 20/20 means that the eye reads at 20 feet what it should read at 20 feet; 20/200 means that it reads at 20 feet what it should read at 200 feet, and so on. It does not mean that 20/200 or 1/10 of normal vision is present. Some examiners, however, translate this into the fraction of vision present, expressed in decimals, when 1. is normal vision, or use fractions expressed in meters, in which case 6/6 is normal vision. The 20/20 method should be the standard, and most state laws provide a corresponding visual loss for each grade of vision below 20/20, vision of 20/200 or below this being considered industrial blindness. Vision should be taken after correcting any refractive error present with test glasses, since a refractive error such as near-sightedness or astigmatism can seldom be caused by injury, and there can be no reason for indemnifying a case for poor vision which was present before the injury. His loss of vision will therefore represent the difference between his best vision with glasses and normal vision. Another piece of valuable information is afforded by a careful test for glasses, since where there is a marked difference between the refraction of the two eyes, the one with the greatest refractive error often has had defective vision from birth, which cannot be improved by glasses. I have seen many patients who had received some trifling injury and who then discovered for the first time a marked deficiency in vision. If there is no evidence of sufficient damage to account for such visual loss and this eye has a greater refractive error than its fellow, we may assume with almost absolute certainty that the defect was present before and not caused by the injury. The real difficulty comes when some evidence of damage is present, such as a small cor-

neal scar, which does not seem great enough to account for the loss claimed. Here the evidence of a marked difference in refraction is important enough to be used in court as an argument for a previous defect. Many companies, especially the railroads, protect themselves against the possibility of unjust claims of this kind by recording the vision of every employee in the train service, so that they have record of any previous defects. Other companies, such as some of the packing houses, are also doing this, and where physical examinations are made, it would always pay to take and record the vision of the employee. Many injustices undoubtedly occur under the law, and one of the most needless of these, it seems to me, is the ruling in some states that the visual loss must be computed from the vision without glasses. This was true in Nebraska, and I have seen many cases indemnified for visual defects which were due chiefly to refractive errors and only in small part to an injury.

Besides the central vision, which is all that is referred to in the previously described tests, there are two other functions of the eye which must also be considered, because either may be damaged without corresponding loss of central vision. These are the capability of normal movements which enable the eye to work with its fellow, and the possession of a field of vision. The latter means that besides what we see when fixing on an object, we see objects indistinctly all about us and a loss of part of this field, as may occur after certain injuries, may be a serious handicap in work. Practically such field losses, though occurring not uncommonly in disease, are rarely the result of accidents without serious damage to central vision. Disturbances of the movements of the eye, however, may be very important. Paralysis of the muscles which move the eye may occur by direct injury to the muscles, or by injury to their connections in the brain as after a skull fracture. Such paralyses cause double vision which often absolutely incapacitates a man for work unless the offending eye is covered. I have known such cases to be indemnified for the loss of an eye although the eye possessed normal vision, because work was impossible unless it was covered. The question of operating to correct such muscular defects comes up. Since we cannot absolutely promise relief of the double vision in many cases, I believe it would be impossible to force an employee to accept operation. It can be stated, however, that operation may be done without risk, so that some courts might rule that the employee should submit to operation. I know of no case of just this kind, but the Illinois courts did rule in a case of cataract causing blindness that the employee was not entitled to compensation till operation had been performed. A railroad case seen this year with double vision following a fall on the head accepted operation voluntarily and obtained complete relief of symptoms.

Because of the complex factors involved in compensating eye injuries, a committee of the American Medical Association in 1925 proposed a scheme for evaluating them; the percentage of central vision, field and motility being multiplied to give the total visual efficiency and the loss in efficiency being the difference between this and 100 percent. This was accepted as a fair basis for compensation and an attempt was made in many places to turn in medical reports on the basis of its schedules. My own experience with it was that it was often too complicated for the Labor Commissioner to appreciate, although it is a very fair scheme. I believe the most practical method is to estimate loss of central vision according to a standard scale such as was proposed by the committee, and bring in motility and loss of field as additional defects only in the rare cases where such losses occur, when the method of computing additional compensation for them proposed by the committee will prove a useful one.

There are a few situations pecular to eye injuries which are perhaps not perfectly understood. One of these occurs when cataract follows an injury. Cataract is, of course, an opacity of the crystalline lens, which occurs usually after any wound of its capsule or in old age, spontaneously. The opaque lens can be removed by an operation and good vision is usually obtained, often normal vision. This is only obtained, however, by the use of a strong lens, strong enough to prevent the use of the two eyes together. Because of this, the Illinois compensation law holds that even where operation has been performed, the patient "must be deemed to have suffered

a total loss of one eye." This seems unjust, since without any glass a great deal of benefit is obtained from the additional visual field, and most important of all, if the patient should lose the other eye, he would then resume use of his injured eye with the glass and would be capable of most kinds of work. Under the present law, however, there is no inducement to Insurance Companies or Employers to pay for cataract operations which will not reduce the amount of compensation paid. This does not alter the fact that such operations should be performed at the time when operation is safest, although this must usually be at patient's own expense. In the case mentioned above where one eye was lost and the other eye had a cataract, operation was presumably paid for by the company, as it would save the patient from becoming totally disabled, and obviate, in fact, paying compensation for the loss of one eye if the result were good.

Another condition which is a cause of some misunderstanding between physician and adjuster is detachment of the retina. This is a loosening of the most important membrane of the eye, the retina, which is the sensitive film with which we see, from its attachments. It is often caused by injury, and any blow on the eye, or even a severe fall not involving the eye, may cause it. The cause of complication is that this detachment may not occur at once, but some time after the injury, when all obvious signs of injury have cleared up. In fact, it may occur, as in a case I saw, several years later and still be due, in all probability, to the injury. It usually occurs sooner, however, within a few months and a number of things help us in determining whether or not a given case of detachment was due to injury. The injury should be a sharp blow on the eye, which need not perforate the eyeball. The retina should show at the time a swelling or hemorrhages and hence should be examined carefully with the ophthalmoscope after every such injury. If such evidence is present, we must lay our patient up for at least a week to lessen the danger of detachment, and after any severe blow on the eye this is undoubtedly the only safe course to pursue. It is in these late detachments that real injustice may be done an injured man who has already settled for an apparently minor injury. Really such cases should only be settled with a reservation in case such trouble should develop later, but I believe this is impossible to do practically, and that any court would reopen a case which should later lose an eye in this way.

After any corneal ulcer or corneal erosion a certain amount of scar is left, which interferes considerably with vision. This clears gradually, and the clearing process continues for months and even years. There is always an anxiety to settle up compensation cases, often on the part of the adjusters themselves, which leads to overcompensation in these cases, since a visual loss estimated a month after an ulcer may be reduced by half or three-fourths after a year. The clearing that occurs after a year is usually slight, but where the loss from a corneal scar is great it is certainly worth while to postpone settling a case for at least that length of time, provided the patient is at work in the meantime, as he usually should be.

I would like to return as a last point to the problem of detecting malingerers who claim ocular damage.

The malingerer seldom claims to be completely blind in both eyes, as this is too inconvenient and involves a scheme of deception too complicated to be carried out for long. He often claims complete or almost complete blindness in one eye. Examination of the eye, if it shows no evidence of injury or disease of the vital parts of the eye, will usually convince us that we are dealing with a malingerer. We can prove this by placing the edge of a prism before the pupil of the good eye which is fixed on a light. This causes the patient to see two images with the one eye but if he is malingering he will deny seeing more than one, in the belief that one image is seen with the other eye. If he claims to see only one light we have definite proof that he is malingering. We must then prove that the other eye sees, and if possible, how much it sees. If the pupil contracts when a light is flashed upon it, it is almost certain that it sees. The patient is seated before the test chart and told to look at the letters with both eyes open, without closing either eye. A testing frame is then placed over both eyes, containing before the eye claimed to be defective a plain glass and before the good eye a strong lens which will blur the

vision considerably, and he is asked to read. Being unable to tell which eye he is using, he will often read the line corresponding to normal vision, and can then be easily shown that he was doing so with the eye claimed to be blind. Another method is to place two cylindrical lens which neutralize each other before the good eye and while the patient is reading to turn one lens slightly, which will blur the vision. If the patient continues to read he is doing so with the so-called blind eye. This method is successful with most patients who are trying deception for the first time. It may be defeated, however, by the patient closing the defective eye during the test, when the true conditions of the test are suddenly realized. When once this trick is learned, and it may be learned before we have obtained any information by it, we have a real problem, especially if not complete, but only partial blindness is being claimed. We may try to catch the patient by several methods which he may not know about. Thus if he claims to see only 20/200 we may bring him to 10 feet instead of 20, when if he still sees only the 20/200 letter he is malingering. We may take his visual field with small colored objects, and since he does not understand how small his field should be for the vision claimed, he may admit having a fairly normal field which would be impossible with the visual defect claimed. What we really want to know, however, is just how much he sees.

In examining a case this year I thought of a trick which I afterwards found had been used in much the same way some time ago, and was then apparently forgotten about, and which has been very useful. This patient, a Mexican laborer, was brought in by a white man with obviously very defective eyes, who acted as his interpreter. The white man whom I thought was probably an experienced malingerer, had evidently taught him the usual tricks, as by none of them would he admit seeing more than shadows. I thought of an instrument, used to exercise the muscles, called Worth's amblyoscope with which the patient looks through tubes which may be crossed so that one is unable to tell which image belongs to which eye. I placed the picture of a bird on the side of the defective eye, one of a cage before the other eye, and crossed the tubes so that the bird seemed to be seen by the good eye. The man at once answered that he saw the bird, so that we knew at once that he could see an object at least as small as the bird with the eye claimed to be almost blind. By figuring the length of the tube and size of the bird, we could say that his vision was 20/100. It was probably much better but we had no standard objects smaller than this. Since then I have had made a set of test types for the instrument, with which vision of 20/20 can be recorded. With these types I was recently able to prove vision of 20/30 for a man who claimed that the eye was blind. He was interesting, as he had already been passed by the local railroad surgeon as having lost the sight of one eye, and only came before me when he attempted to prove loss of vision in the other eye. There was absolutely nothing abnormal to be seen inside the so-called blind eye, the only peculiarity about it being a wide dilatation of the pupil. The other eye had an irritation of the lids which was subsequently found to be brought on by his putting irritating materials such as lime and sand in the eye. We had his belongings searched when he was asleep and found the atropine with which he was keeping the right pupil dilated, and his discomfiture was completed by the test with the amblyoscope.

This work of showing up malingerers calls for a certain primitive cunning and success in it affords a type of unholy pleasure quite different from that which the good physician feels as he goes on his usual errands of mercy.

58 E. Washington St.

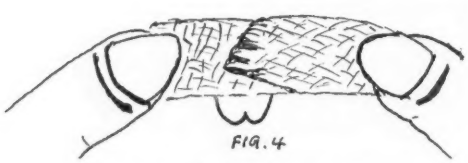
CIRCUMCISION

FREDERICK C. SCHURMEIER, M. D.
ELGIN, ILLINOIS

Having used this method many times and finding it very expedient and efficient, I pass it on to those who care to use it.

Procedure: Before the surgeon begins the operation, he threads a fine curved cutting needle on a ten-inch strand of No. 00 plain catgut; he also cuts a one-inch slit in the vaseline gauze (see Fig. 1). Having now finished the cutting part of the operation, he places a three-in-one stitch, as indicated in Fig. 2, which when tied brings the flaps together (see Fig. 3). A stitch may be placed on the dorsal side. The long end

of the vaseline gauze is passed through the slit near the shorter end—the loop passed over the head of the penis and slight traction made (see Fig. 4) which effectively controls oozing, as it



Figs. 1-4. Explanation in text.

acts as a tourniquet. The shorter end is now folded under to where it meets base of longer flap; the longer end is folded over the shorter end and over the top; there is now a six-layer gauze all around.

It will not slip. Hemostasis is perfect. The wound is kept free from urine.

The vaseline gauze is left in position four days, when it is easily slipped off.

OBSERVATION OF THE USE OF SODIUM-ISO-AMYL-ETHYL BARBITURATE UNDER THE TRADE NAME OF SODIUM AMYTAL AS AN ANESTHETIC

ARTHUR E. JOSLYN, A. M., M. D.

MAYWOOD, ILLINOIS

Several reports have appeared in print concerning the use of this drug, but as yet we have seen nothing which follows the technique we employ and find very satisfactory. Therefore, this abbreviated report is submitted with the idea that it may have some interest even though the cases are insufficient in number to allow conclusions of definite finality.

Thus far it has been used in 25 major cases and tried in three obstetric and a few minor cases. Twenty-three of these major cases were in the department of general surgery under Dr. Leslie B. Joslyn, and two in the nose and throat department under Dr. Irwin G. Spiesman. For relatively normal obstetric cases, we cannot, ourselves, feel it is indicated, because in the small doses producing analgesia, while the patient may have no memory of any pain, the difficulties for the attendant are too great for us to feel favorably inclined toward its general use in obstetrics.

The 25 cases are fairly representative of general surgery as it comes to the ordinary office. The youngest patient was 12 years old and the oldest 73 years old. They included six cholecystectomies—only one of which was that alone. One of these had an appendectomy and herniotomy, another a repair of ventral hernia, another an appendectomy and excision of abscessed ovary. Among the cases were several perineal operations for rectocele and cystocele, also trachelorrhaphy with other pelvic work. There was one prostatectomy, three sub-total thyroidectomies, one ruptured pyloric ulcer, one pyloric ulcer with erosion to the serosa and one with a large stone in the common bile duct with a mass of adhesions in a patient who eight years before had had a cholecystectomy. One was a case of undescended testis. One was a radical maxillary sinus case and one a nasal case with polypi on turbinates and septum as well as the usual polypi arising from the ethmoid region. This case required complete exenteration of the ethmoid cells of both sides.

Although the number of cases is far from large it can be seen they are varied and that many were extensive and time consuming which allows at least a tentative evaluation of the usefulness of this drug. Any review of the work done by others, either laboratory or clinical, is purposely omitted for there is here no idea of presenting a complete and authoritative report.

It is very probable that any one reading this report is familiar with the hypodermis tablets of morphine, hyoscine and cactoid under the abbreviation of H. M. C. from the Abbott laboratories. They will be called H. M. C. I containing one-fourth grain of morphine and II con-

taining one-half the quantity of the various ingredients. In all except the first case preliminary administration hypodermically of this narcotic was employed. On the first case which was a radical antrum operation no preliminary drug was given and 22½ grains of the sodium amytal was injected very slowly with careful record of the blood pressure every minute or two. This case was very unsatisfactory although deep narcosis was apparently obtained after three grains had been injected. As the operation progressed the patient moved his head sufficiently to hamper seriously the work of the surgeon and a small amount of ether was necessarily added. Subsequently the following technique was employed.

Two hours before the operation is scheduled an H. M. C. I is given subcutaneously unless the patient be very young or low in weight. Then one-half hour before the scheduled time an H. M. C. II is administered unless the patient is very drowsy, in which case it is omitted. At the scheduled time of operation or about 10 minutes before, the sodium amytal is started intravenously, the dose given depending entirely on several factors, viz: the size and age of the patient, the fall in blood pressure noted, and the depth of narcosis from the H. M. C. administered. The smallest dose given was four grains and the largest 15 grains, the average being 7½ grains. During the operation more is given if required. In only two cases was any other anesthetic used, one being the case of cholecystectomy, appendectomy and excision of abscessed ovary. In this case after the removal of gall bladder and closure and upon making the second incision lower down to reach the pelvis the patient began to move and a small amount of ethylene was added. No doubt three or four grains of sodium amytal at this time would also have been effective. In the other case that of herniotomy the patient was scarcely affected by the H. M. C. administration and was still conscious after five grains of sodium amytal had been given. This case was given a low percentage of ethylene throughout the operation.

We believe from our limited experience that it is of great importance to inject slowly and to constantly watch the blood pressure. After giving this drug to several patients and obtaining only a moderate fall in blood pressure, we began to think its importance over emphasized, when we had full occasion to realize the erroneousness of any such conclusion. A patient of 52 years weighing normally 164 pounds, had a blood pressure of 164/92 just before sodium amytal was administered. This case had had the usual preliminary H. M. C. I and II as described. As soon as the sodium amytal was administered the blood pressure began to fall, reaching the low level of 58/40 after eight grains had been given over a period of 13 minutes. The injection was stopped and an ampoule containing 7½ grains of caffeine sodio-benzoate with three-eighths grain of ephedrine sulphate was administered hypodermically and the patient was taken to the operating room. At the instant of making the skin incision 24 minutes later the blood pressure was 74/44. As operation progressed the patient became rigid. In just 10 minutes the blood pressure has risen to 114/74 at which time more sodium amytal was given. By the time seven grains more were administered the blood pressure had gone up to 124/82 instead of falling as it had done during the administration of the first eight grains. The operation, which was relatively severe was finished without anesthetic difficulty and with excellent relaxation. This case had a stone in the common duct with a mass of adhesions from a previous cholecystectomy. The recovery was rapid and this patient had no nausea and very little pain, receiving an H. M. C. II every six hours for 24 hours. This case illustrates not only that occasionally a very severe fall in blood pressure may take place which requires stopping the administration of that amount of sodium amytal sufficient for the operation, but that more may be given while the operation is in progress without a second marked diminution in pressure. This we have observed in several instances, only once there being any rapid fall in pressure during the second administration coincident with the operation. This case accidentally had several grains administered very rapidly. Her fall in blood pressure must have been almost to the vanishing point for the pulse became imperceptible and respiration ceased. Adrenalin and artificial respiration rapidly restored the patient to good condition and the operation which was a perineal repair, proceeded without interruption. Such experiences make us feel that slow injection and careful observation of blood pressure are imperative.

All patients given sodium amytal become very

restless upon regaining consciousness, and we find that the further administration of H. M. C. advisable. We usually give an H. M. C. II as soon as the restlessness becomes evident, and repeat it every six to eight hours for the first 24 hours as indicated. Here a note of warning needs to be sounded, viz: to watch for any case which may show signs of insufficient oxygenation. Any cyanosis should be observed and the patient placed in a position to overcome obstruction of respiration. Stimulation with caffeine and ephedrine and intravenous glucose may be advisable. We consider that in all cases cyanosis should not be permitted. Close observation is absolutely necessary for these patients. They can not be left to the general care of a routine floor nurse unless she has time to give to these patients and some knowledge of their behavior. Without further detail our impressions are as follows:

1. Sodium amytal may be used for most operations without other anesthetic provided a preliminary narcosis is obtained from morphine and hyoscine. Our technique is to give an H. M. C. I two hours before the time scheduled for operating and an H. M. C. II one-half hour before operating unless the patient has become drowsy.

2. The amount of Sodium amytal given must depend upon the degree of narcosis when it is started and the amount required to induce an apparent deep sleep. If the patient is drowsy at the beginning and soundly asleep after two or three grains are given, the total administration at that time should be 7½ grains or less. If more is needed give it on the table. If blood pressure falls markedly, stop while the patient is acting well and administer caffeine sodiobenzoate with ephedrine and if necessary adrenalin as well. Expect a marked fall in hypertensive cases and in elderly people. Watch for a fall in all cases.

3. If relaxation is not sufficient after the operation is under way given more sodium amytal. The fall in blood pressure will probably not be as great as originally, but the necessity for administering it slowly still remains.

4. Always have a syringe of caffeine sodiobenzoate with ephedrine ready for instant use as well as one of adrenalin hydrochloride. This point was included under impression number one, but deserves separate mention.

5. Post-operative restlessness is the rule, coming on several hours after the drug has been administered. For this H. M. C. II should be given and repeated if necessary, but care must be exercised that the patient has sufficient oxygen, and no obstruction to respiration. Anoxemia with acidosia is possible. Do not leave these patients in the care of any one not familiar with or at least not instructed as to the possible course of events.

6. While this drug may be used in nearly any operation, its particular field of usefulness is in operations about the head and neck. It removes the dread of taking an anesthetic, which is very real to many patients and eliminates to a very large degree the subsequent nausea. We believe this drug may prove a very valuable addition to the list of general anesthetics.

NOTE: Since the writing of this article we have used this anesthetic in as many more cases as here reported. This further experience has not modified any conclusions, except, that a very small amount of ethylene is required to supplement this anesthetic when it is not expedient to obtain rather profound preliminary narcosis with morphine and hyoscine, or to use more of the sodium amytal on the operating table. The percentage of ethylene should never be high.

BUTTERMILK AS AN INFANT FOOD

A process for preparing buttermilk for infant feeding is fully described by A. B. Marfan, Paris. He measures and compares its nutritive values, describes the character of the digestion and the nutritive changes in a child fed with buttermilk, gives directions as to its use in the feeding of healthy as well as of weak and hypothreptic infants, and warns against its use in case of constipation, acute diarrhea and the toxic phase of choleriform diarrhea.

Society Proceedings

COOK COUNTY

CHICAGO SOCIETY OF INDUSTRIAL MEDICINE AND SURGERY

Meeting, March 4, 1931, 8:15 *P. M.*

Carbon Monoxide Poisoning (Illustrated by Motion Pictures) .....W. D. McNally
Discussion: Frederick W. Slobe and Fred M. Miller
Reduction of Fractures and Dislocations Under Local Anesthesia. (Illustrated by Motion Pictures and Lantern Slides) .....C. R. G. Forrester
Discussion: W. R. Cubbins, James Callahan and E. B. Fowler.

CHICAGO ROENTGEN SOCIETY

Meeting, March 11, 1931

Relation of Roentgenology to Other Branches of Medicine .....Morris Fishbein
The Relation of Colitis to Polyposis.....
.....Dr. J. A. Bargen, Rochester, Minn.
The Earliest Signs of Colonic Malignancy.....
.....Dr. H. M. Weber, Rochester, Minn.
Open Discussion.
Edward L. Jenkinson, President,
Geo. L. Landau, Secretary.

CHICAGO MEDICAL SOCIETY

Meeting, March 18, 1931 .....

Symposium on Diseases of the Heart.....
.....By Loyola University School of Medicine
The Heart as a Factor in 5,000 Coroner's Cases....
.....Thomas P. Foley
The Heart and the Diaphragm.....I. Trace
Auricular Fibrillation; Etiology, Mechanism, Diagnosis and Treatment. (Lantern Slides)..I. F. Volini

CHICAGO MEDICAL SOCIETY

Joint Meeting with the Illinois Socity for Mental Hygiene

Meeting, March 25, 1931

The Acute Medical and Surgical Service of a State Hospital .....George A. Wiltrakis
Psychiatric Social Service.....Mrs. Louis McNamara
Hemoclastic Crises in Mental Patients..Daniel Haffron
The Use of Sodium Amytal as a Sedative in the Psychoses .....Abraham Ettelson
Colloidal States in the Blood in Catatonia.....
.....Dr. F. LeBlanc, Elgin
Dr. Leah Lurie, State Psycopathic Institute, Elgin
Discussion: Lewis J. Pollock, Charles F. Read, Sidney D. Wilgus and Francis J. Gerty.

Marriages

BERT M. BREWSTER, Fieldon, Ill., to Mrs. Beatrice Johnson in St. Louis, January 16.

FREDERICK B. MOOREHEAD to Miss Marjorie Maxwell, both of Chicago, February 1.

JOSEPH SHANKS to Miss Eleanor A. Berg, both of Chicago, February 11.

LORAINE E. TEGTMEIER to Miss Elvira Nold, both of Millstadt, Ill., February 11.

Personals

Dr. Ora L. Pelton has retired after fifty-eight years in the active practice of medicine in and near Elgin.

Dr. Albert H. Andrews, among others, addressed the Chicago Laryngological and Otological Society, March 2, on "Indication for Operation in Acute Mastoiditis."

Dr. Ernest Sachs, St. Louis, addressed the Adams County Medical Society, February 9, on "Diagnosis and Present-Day Treatment of Brain Tumors."

Dr. Nelson M. Percy, Chicago, addressed the Will-Grundy Counties Medical Society, Joliet, March 4, on goiter. Dr. James H. Hutton spoke, March 11, on "Endocrine Control of Obesity."

Drs. Andrew C. Ivy and William R. Cubbins, Chicago, addressed the Sangamon County Medical Society, Springfield, March 5, on the cause of gallstones, and "Fractures—Conservative and Operative Treatment."

Drs. Sandor Horwitz and William A. Hinckle were the speakers at the meeting of the Peoria City Medical Society, February 17, on "Medicine as Practiced by the Early Hebrews and Jews during the Bible and Talmudic Times" and "Anal Rectal Abscess and Fistula." Dr. Noble Sproat Heaney, Chicago, spoke March 3 on endometriosis.

Karl F. Meyer, Ph. D., director of the George Williams Hooper Foundation for Medical Research, University of California, will deliver the seventh Ludvig Hektoen Lecture of the Billings Foundation before the Institute of Medicine of Chicago in the City Club, April 24. Dr. Meyer will speak on "The Animal Kingdom—A Reservoir of Disease."

Dr. William Thomas McLean, Maroa, was the guest of honor at the meeting of the Decatur Medical Society, February 17, in celebration of his completion of fifty years in the practice of medicine; his son, Dr. Franklin C. McLean, director of clinics and professor of medicine, University of Chicago, was the principal speaker and reviewed medical progress during the past fifty years.

Dr. Max Thorek addressed the Tri-State Medical Society at Shreveport, Louisiana, March 20, on "Possibilities in the Reconstruction of the Human Form."

News Notes

—The Chicago Gynecological Society presented the following program: 1. Syphilis of the Fetus and Newly Born Infant, by Fred L. Adair,

M. D. 2. Surgical Anatomy and Episiotomy with Modeling Clay, A Moving Picture Demonstration, by Joseph B. DeLee, M. D.. 3. Radical Episiotomy; an analysis of six hundred consecutive Normal Primiparous Labors Terminated by Timely Episiotomy and Forceps Extraction, by William H. Rubovits, M. D.

—Dr. C. L. Birch discussed Hemophilia, Platelet Study and New Treatment, before the Medical Research Club of the University of Illinois, March 18. Excretion Into and the Effect of Drugs on the Lungs, was discussed by Messrs. H. G. Becker and D. S. Jaffray.

—The Chicago Council of Medical Women held their regular monthly meeting at the Medical and Dental Arts Club, April 3, 1931, with the following program: Emotional Instability in Children, Mary A. M. Lee, M. D.; Discussion, Evelina W. Ehrmann, M. D. Mental Hygiene in Students at the University of Chicago, Margaret W. Gerard, M. D.; Discussion, Mary E. Poague, M. D.

—The Bacon Lectures are given each year at the College of Medicine, University of Illinois. The lecturer this year is Professor Herbert A. Evans of the University of California. On March 31 the subject was "The Hormones of the Hypophysis." On April 1, "The Relation of the Hypophysis to the Reproductive System."

—The Chicago Society of Allergy will present the following program at the Medical and Dental Arts Club, April 20, 8 p. m.: 1. A New Method of Non-Specific Treatment of Allergic Disease, preliminary Report, S. M. Feinberg, S. L. Osborne, and M. L. Afremow. 2. A Study of Reactions of Mixtures of Reagin and Atopen, Francis Foran and M. R. Lichtenstein. 3. Case Report: Eczema Due to the Pollen of Rough Marsh Elder, B. Z. Rappaport. Discussion open to all. All interested urged to attend.

—House Bill 301 proposes to make it unlawful to sell any preparation containing wood alcohol, methanol or methyl alcohol, unless the container, in addition to being labeled as now required by law, contains the following statement in letters not less than one-eighth inch in height: "Warning: Wood alcohol (methanol or methyl alcohol) is extremely poisonous and may cause blindness or death if it enters the body through the mouth, by skin absorption or by inhalation of vapors."

—A department to be known as the Samuel Deutsch Convalescent Human Serum Center has been established at Michael Reese Hospital with funds provided by the children of Mr. Deutsch. It will supply special human serum to the Chicago district for the treatment of various infectious or contagious diseases, and especially for the treatment of infantile paralysis. It is said to be the first serum center to be established in the state. The comparative figure for the number of cases of infantile paralysis in Illinois were 410 in 1930 against 88 in 1929. The serums are to be obtained only from patients who have recovered from various diseases and whose serum has been shown to prevent disease in patients who have been exposed to similar infection. Cooperating with the new serum center, the Illinois State Board of Health will distribute convalescent serum. Drs. Sidney O. Levinson and Leo Zimmerman are assisting in this work.

Deaths

CHARLES B. BATEMAN, Centralia, Ill.; Keokuk Medical College, College of Physicians and Surgeons, 1904; aged 53; died, February 8, of cerebral hemorrhage.

WILLIAM ALEXANDER BRITTIN, Virden, Ill.; Marion-Sims College of Medicine, St. Louis, 1895; member of the Illinois State Medical Society; mayor of Virdin and president of the school board the past four years; aged 64; died, February 11, in St. John's Hospital, Springfield, following gangrene and amputation of his leg.

FREDERICK J. FIELDING, Chicago; Keokuk (Iowa) Medical College, 1896; Fellow, A. M. A.; on the staffs of the Lutheran Memorial Hospital and the Belmont Hospital; aged 64; died, March 9, of cerebral hemorrhage, as the result of a fall while trying to extricate a stalled automobile.

WALTER CLARK HOVEY, Nokomis, Ill.; Medical Department of Washington University, St. Louis, 1897; aged 57; died, March 1.

JOHN KEAN, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1878; aged 98; died, Dec. 1, 1930, in Jacksonville, Fla., of senility.

GEORGE MACKAY LAING, Cicero, Ill.; L. R. C. S., Ireland, 1889; aged 61; died, February 9, of wounds received when shot by bandits.

JOHN F. RUNNELS, Chicago; Louisville (Ky.) Medical College, 1879; aged 81; died, March 6, of mitral insufficiency and arteriosclerosis.

ERI PERRY RICE, Chicago; Rush Medical College, Chicago, 1889; member of the Illinois State Medical Society; aged 71; died, February 21, of pneumonia.

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